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ABSTRACT

A project is reported and evaluated which provided experience-based career education opportunities for grades 9 and 10 in Minot, North Dakota, through Career Education PLUS (Planning, Learning, Understanding, Succeeding), an alternative education program. Focus of the evaluation is on the project objectives: to provide students with (1) training in basic and job entry skills, (2) opportunties to develop good study habits, decision making and job search skills, and a positive work attitude, and to explore and become aware of career choices, and (3) continual guidance. The two sections of the report--the third year (1978-79) and the total project (1976-79)--are parallel in structure. Following a product evaluation by analysis of covariance is a description of major activities and events, including parent orientation, informational mini-fairs for students and parents, program and materials improvement, advisory board meetings, and teacher workshops. Recruitment and transportation problems and publicity and dissemination activities are then discussed. Project evaluation focuses on objectives in the process (life, basic, and career skills) and product (student outcomes and parents', students', and employers' perceptions) phases. An implementation evaluation monitored the management plan. Staff development through project staff, faculty, and administration and employer instructor inservice are discussed. Materials in the appendixes include analysis of covariance data; student, employer, and parent opinion surveys: and follow-up questionnaire. (YLB)

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CE 023 238

FINAL REPORT

Project No. 498AH0033
Grant No. G08-76-0113

Career Education: Planning, Learning, Understanding, Succeeding
CE+

Exemplary Project in Vocational Education
Conducted Under
Part D of Public Law 90-576

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REPORTING PERIOD

This reporting period extends from
September 1, 1976 to August 31, 1979

Signature of Project Director

August 31, 1979
Date

Table of Contents

Page
Title Page i
Summary of the Report (Third Year) 1
 A. Time Period Covered 1
 B. Goals and Objectives 1
 C. Results: Accomplishments 1
 D. Evaluation 1
 E. Conclusions and Recommendations 3
Body of the Report 4
 A. Accomplishments 4
 B. Major Activities and Events 4
 C. Problems 10
 D. Publicity Activities 10
 E. Dissemination Activities 13
 F. Progress on Data Collection and Evaluation
 Plans and Procedures 14
 G. Staff Employment and Utilization 25
 H. Staff Development 25

Summary of the Report (Total Project) 29
 A. Time Period Covered 29
 B. Goals and Objectives 29
 C. Results: Accomplishments 30
 D. Evaluation 32
 E. Conclusions and Recommendations 33
Body of the Report 34
 A. Accomplishments 34
 B. Major Activities and Events 44
 C. Problems 45
 D. Publicity Activities 46
 E. Dissemination Activities 46
 F. Progress on Data Collection and Evaluation
 Plans and Procedures 53
 G. Staff Employment and Utilization 115
 H. Staff Development 115
Appendices 121
 Appendix A - Job Sites 123
 Appendix B - Advisory Board Agenda and Minutes 131
 Appendix C - Speakers List of Career Awareness Day 137
 Appendix D - Experience-Based Career Education Workshop Brochure . 141
 Appendix E - ANOCOV 1 through 16 145
 Appendix F - ANOCOV 17 through 32 163
 Appendix G - ANOCOV 33 through 48 181
 Appendix H - Student Survey 199
 Appendix I - Employer Opinion Survey 205
 Appdenix J - Parent Opinion Survey 209
 Appendix K - Follow-Up Questionnaire 213
 Appendix L - Advisory Board Members 217

SUMMARY OF THE REPORT

A. TIME PERIOD COVERED

The time period covered by the total project was September 1, 1976 through August 31, 1979. The first 28 pages of this report cover the third year of the project, September 1, 1978 through August 31, 1979.

B. GOALS AND OBJECTIVES

(Refer to page 28.)

C. RESULTS: ACCOMPLISHMENTS

The overall conclusion of the implementation evaluation for the third year was that the project was functioning efficiently and effectively and was following the intent of the original CE+ proposal.

D. EVALUATION

1. Implementation Evaluation Summary

The overall conclusion of the implementation evaluation for the third year of the project cycle was that the CE+ project has followed the original intent and design of the CE+ proposal.

2. Process Evaluation Summary

The process evaluation consisted of three parts: Basic Skills, Life Skills and Career Skills:

a. Objectives: Basic Skills

1. Improvement in Reading Skills - partial (25%)
2. Improvement in Oral Communication Skills - attained
3. Improvement in Writing Skills - partial (90%)

4. Improvement in Basic Quantitative Skills - partial (90%)

b. Objectives: Life Skills

1. Satisfactory Completion of Projects - partial (90%)

2. Satisfactory Completion of Competencies - partial (90%)

c. Objectives: Career Skills

1. Development of Career Knowledge - partial (33%)

2. Development of Self Knowledge - partial (50%)

3. Career Explorations - partial (92%)

3. Product Evaluation Summary

The product evaluation focused primarily on the six terminal objectives that were assessed.

a. Objectives

1. Students in the program will acquire basic academic skills at least equal to their counterparts in a traditional program - partial (88%).

2. Students in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program - not attained.

3. Students in the program will show more positive attitude toward work than a traditional program - not attained.

4. Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program - not attained.

5. Students in the program will demonstrate a higher level of career decision-making skills, job-hunting, and job-getting skills than students in a traditional program - partial (28%).

6. Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program - partial (50%).

E. CONCLUSIONS AND RECOMMENDATIONS

(Refer to page 33.)

BODY OF THE REPORT

A. ACCOMPLISHMENTS

(Refer to pages .)

B. MAJOR ACTIVITIES AND EVENTS:

1. Career Education Plus began its third year of experience-based learning for high school students in Minot, North Dakota. The change from a three-hour block to a two-hour block has worked better for the students. This change has also made CE+ available to more students.

2. There have been a number of new job sites contacted during this quarter. Forty-four businesses were contacted this fall and agreed to become involved in CE+ if they were needed. At this point there are 92 businesses that are or are willing to become involved in Career Education Plus. A list of the 92 businesses are in Appendix A of the November 30, 1978, Quarterly Report.

Most of these new sites were recruited because of student interest in a particular occupation.

Because of the large number of sites involved in the program, it was necessary to contact some of the previous sites by phone in August. After the initial phone call, a follow-up letter was sent on August 23. In Appendix B of the November 30, 1978, Quarterly Report is a copy of the letter.

3. There were 55 students enrolled in the first semester of CE+. These students were in CE+ for the first semester only. There were 65 students enrolled for the second semester.

The male/female balance factor and grade levels are presented below:

Girls	54	9th Grade	65
Boys	66	10th Grade	45
		11th Grade	8
		12th Grade	12

Students participated in a seven day orientation program. A copy of the orientation schedule is presented Appendix C of the November 30, 1978, Quarterly Report. All staff members were involved in the orientation and felt it helped give the students a better understanding of CE+.

The orientation also allowed the students an opportunity to see what was expected of them during the semester. The grading system was revised to accommodate the change from the three-hour time block to the two-hour block. The CE+ grading system is presented in Appendix D of the November 30, 1978, Quarterly Report.

4. The first semester of Career Education Plus ended on January 19, 1979. The semester ended with 47 students enrolled in the course. There were eight students who either moved or withdrew from school during the semester.

5. The second semester started on January 22, 1979. There were 69 students enrolled in CE+ for the semester. Students participated in a six day orientation schedule which is in Appendix A of the February 28, 1979, Quarterly Report.

6. During the month of February, students enrolled for classes for the 1979-80 school year. The CE+ program interested 196 students for next year. This was a large increase over the past

three years enrollments. With this type of response, it appears that students have a very positive view of the program.

7. The Student Handbook was updated. Some of the changes included the minimum requirements for students, the grading system, and the competencies outlined in the handbook. The 15 competencies have now been compiled in the student handbook, a copy of which is included in Appendix B of the February 28, 1979, Quarterly Report. The competency handbook has been eliminated and is no longer being used.

8. The Exploration Guide, used by students when they go out to different job sites, was rewritten. The Employer Instructor evaluation of the student was included in the guide. A daily diary of the students' exploration was added to the students' reporting duties.

9. During the 1978-79 school year there were 562 individual student explorations conducted at 96 different businesses. These explorations were from three to five days long for approximately 1½ hours each day. There were additional sites recruited. They include the First District Health Unit, Special Education classes at Perkett School, Majestic Dental Lab, Dean-Witter Reynolds and Ramstad Junior High School. Enclosed in Appendix A of this report is the entire list of participating employers and their businesses. Also included in the appendix is a list of other people who have been of assistance with the CE+ program.

10. Parent Seminar - An open house for parents was hosted by the CE+ staff on September 18, 1978. Approximately 30 parents were in

attendance to meet the staff and become oriented in the Career Education curriculum and student requirements. Parents were briefed on credit, the grading system, and reporting, as well as the available job sites open to this year's students.

The staff felt that the seminar was very successful and a similar event was scheduled for second semester. A copy of the letter inviting the parents and the agenda for the evening is in Appendix E of the November 30, 1978, Quarterly Report.

11. The Career Education Plus Advisory Board met monthly during the past year. The monthly meetings were needed in an attempt to do some planning for the future of CE+. Copies of agendas and minutes of the meetings are included in Appendix F of the November 30, 1978, Quarterly Report.

The advisory board for CE+ met in January and February. Curriculum development for the 1979-80 school year was discussed. Also, an endorsement from the advisory board was sent along with a proposal for funding for the 1979-80 school year. This proposal was sent to the State Board for Vocational Education. Appendix D of the February 28, 1979, Quarterly Report has the agendas and minutes of the meetings.

Three new advisory board members were added last fall. One represented the business and office cluster replacing a person who had moved away from Minot. The other two new members were representing an additional cluster to the advisory board, Hospitality and Recreation. Updated information of the 1978-79 advisory board is in Appendix G of the November 30, 1978, Quarterly Report. The

April advisory committee meeting minutes and agenda are included in Appendix B of this report.

12. An open house for parents of Career Education Plus students was held at the Learning Center on the evening of February 8, 1979. Parents were given an overview of the program, a brief history of CE+, a description of student requirements, and a list of job sites available to students.

The CE+ staff also had a booth at a all-school curriculum mini-fair that same evening for all parents of 8th and 9th grade students. Brochures were available to interested parents as well as a viewing of the slide-tape presentation.

Both events saw much interest shown in the CE+ program by Minot parents. A copy of the letter inviting the parents is in Appendix C of the February 28, 1979, Quarterly Report.

13. Ten Career Education students conducted an Anti-Smoking Project for Central Campus. The students put on a poster campaign for a week, hanging posters all around school. One day during the noon hour they had a smoking machine to show how smoking can damage the lungs.

The Biology department worked with the students by allowing the students to conduct class discussions with each Biology class concerning the dangers of smoking.

Four of the students and one of Central Campus's Assistant Principals were on two different local TV programs telling about the project. The educational director from the First District Health Unit in Minot worked closely with the ten students during the entire project.

14. Career Awareness Day - The CE+ staff conducted a Career Awareness Day at Central Campus. The object was to give students an opportunity to hear from people employed in various career areas that were of an interest to the students.

The topics for the day were Agriculture, Aviation, Communication, Computer, Energy, Law, Music, and Medicine. In Appendix C of this report is a speakers list of the different topics for the day. Approximately 1,095 students from Business Education and Math classes were involved in the day. Students selected a topic to see and then attended that class instead of attending their regularly scheduled class for that hour.

15. The week of May 29 through June 1, 1979, the CE+ staff conducted a workshop for educators from North Dakota. There were 22 participants in the class. The class presented some ways of expanding the learning process at the secondary level.

The week exposed teachers to special activities that relate experiential learning. Teachers were also made aware of their role in assisting students in their choices of experience based activities.

The participants receive graduate credit through North Dakota State University and undergraduate credit through Minot State College. Appendix D of this report is a brochure for the workshop. The three Minot Junior High Schools hosted mini-fair days for their eighth grade students this winter prior to those students registering for high school. Career Education staff and students participated by manning booth at each school during the fairs which were held on February 13, 14, and 15, 1979. Eighth grade students at each junior high school viewed the CE+ slide-tape presentation and had an opportunity to visit with CE+ instructors and students. A similar program was held for 9th and 10th grade students from Central Campus.

A special brochure was prepared for these events, a copy of which is included in Appendix H of the February 28, 1979, Quarterly Report.

17. The CE+ staff developed proposals for CETA funding through the YETP Program and the Title II of CETA legislation. The YETP funding has been approved for the 1979-80 school year.

The State Board for Vocational Education also approved funding for the CE+ program.

18. An appreciation banquet was held for all the employer instructors, certifiers, advisory board members and other individuals involved with the CE+ program. The banquet was sponsored by the Elks Lodge, a local fraternal organization.

C. PROBLEMS

None

D. PUBLICITY ACTIVITIES:

1. The CE+ newsletter "The Explorer" was sent the first part of October. Approximately 800 copies of the newsletter are mailed to educators, employers, parents and students around the state. A copy of the October issue is in Appendix H of the November 30, 1978, Quarterly Report. The newsletter was also published in

December and February. Copies are in Appendix E of the February 28, 1979, Quarterly Report.

2. On Friday, October 27, 1978, the Local Coordinator visited with the Exploratory Business classes at Central Campus. The slide presentation of the CE+ course was presented. The students were then told more in detail about the course and how they must go about planning for their future.

3. Ninety educators from the Canadian Providence of Saskatchewan visited the Minot Public Schools. Two principals and one guidance counselor visited the CE+ area. They were given an overview of the program by the Local Coordinator. Student handbooks, student project books and exploration guides were provided for them.

4. In conjunction with the local teachers' association, the Career Education Plus staff was involved in activities which highlighted American Education Week. Together with several other programs, CE+ staff and students manned a booth in a local shopping mall answering questions and providing information about the course to the public.

The "Education on Display" activities took place on November 10 and 11, 1978, and gave an excellent opportunity to disseminate information about CE+.

5. On November 30, 1978, the Career Education Plus staff made a presentation to the school board. Since this was the third and final year of federal funding for the CE+ program, it appeared appropriate to bring the board up-to-date on what was happening in Career Education.

Two students who were in the program last year told how they viewed CE+ and how it had helped them make decisions about their future. A parent of a student in CE+ told how she felt the class had helped her daughter on her overall outlook on life.

This presentation gave the CE+ staff an opportunity to not only update the school board, but also tell the board about some of the future plans for CE+!

6. A Minot Public School board member conducted her own survey regarding the CE+ program. She sent out a questionnaire to the employer instructors in the community. The results were very positive. In Appendix F of the February 28, 1979, Quarterly Report is a copy of the newspaper article where she made her report back to the school board.

7. The State Board for Vocational Education sponsors a radio program which is on the air every day broadcast throughout the state. Peg Portscheller, Learning Manager, was on the air on February 1, Dave Kjos, Learning Manager and Resource Specialist on February 2, and Bruce Walker, Local Coordinator on February 6, all telling about different phases of the CE+ program.

8. Approximately eight members of the staff from the State Board for Vocational Education were given CE+ materials. They were told of the background of CE+ and given an overview of the total project. Questions were entertained by the CE+ staff.

9. The CE+ coordinator spoke to about 25 business people at the local Optomist club regularly scheduled meeting. The slide presentation of CE+ and a short speech was followed by questions con-

cerning the program. There was definite interest in other businesses becoming a participant in the program.

10. The Minot Rotary Club was shown the slide presentation on the April 9, 1979. From the questions asked by the audience, the real interest the community has in the total educational system in Minot was apparent.

E. DISSEMINATION ACTIVITIES:

1. The staff of the Career Education Plus program met on Tuesday, October 31, 1978, with the Philosophy of Education class from Minot State College. The instructor and eight students attended. Bruce Walker, Local Coordinator, gave the group an overview of the project, touching on the steps taken in applying for the project and the philosophy of experienced based career education. Bruce also explained the site recruitment process and the various activities the students were involved in out in the community. Learning manager, Peg Portscheller explained the various curriculum components of the project including projects, basic skills, journals and seminars. Peg also discussed the Career Education program as a part of Minot High School. Learning Manager, David Kjos explained the competencies used by the program. He covered the steps the students take to complete each of the competencies.

An invitation was extended to the class to return to the project at any time if further information was needed.

2. The CE+ staff had the opportunity to present to 104 North Dakota Secondary School Principals information about the program on January 22, 1979, in Bismarck. The principals received an overview

of the curriculum. The CE+ slide presentation was utilized. Background information about the project on how it was started and where it is today was discussed.

Materials, including a student handbook and an exploration guide given to each principal. They were told how adaptable many parts of this program can be to all different size schools.

Some questions were entertained towards the end of the presentation. Inquiries were made about having the CE+ staff visit individual schools.

3. The CE+ staff conducted an inservice workshop for the secondary school instructors at Williston, North Dakota on March 14, 1979. There were about 75 staff members involved.

It was shown how parts of the CE+ program could be adapted to each classroom. The teachers were very interested in the competencies and projects that could adapt to their particular situation.

F. PROGRESS ON DATA COLLECTION AND EVALUATION PLANS AND PROCEDURES:

1. The staff has conducted a follow-up study with students who were involved in the program during the 1977-78 school year. The letter and questionnaire that was sent to all students are in Appendix I of the November 30, 1978, Quarterly Report.

2. A parent opinion survey was sent out at the end of the first semester. This survey was sent to parents of children who were in CE+ during the first semester. A copy of the survey is in Appendix G of the February, 1979, Quarterly Report.

3. The following pages are the results of the post-test data on first semester students and the pre-test data on the second semester students.

INTERIM REPORT #3

Evaluation of Career Education Plus

by

Dr. Richard G. Landry

University of North Dakota

The final process evaluation of the CE+ program took place in April, 1979. The purpose of this evaluation was to assess the level of career maturity, knowledge, and aspirations of the CE+ students midway through the second semester. For the purpose, the evaluator chose the Career Maturity Inventory (CMI). The CMI was chosen for the following reasons.

First, it reflects the current emphasis on career education that is a parallel process to career development. Between the two is a common focus upon youth's emerging readiness and competence to enter and compete in the world of work. Second, "career" does not have some of the specialized meanings that are associated with "vocational"; it symbolizes a new point of departure and value system in preparing everyone to play a meaningful and productive role in the marketplace. And third, "maturity" captures and conveys the concept of progressive change which underlies emerging career awareness exploration and decision-making.

The CMI has been conceived and constructed to measure the maturity of attitudes and competencies that are critical in realistic career decision-making. In the past, it was thought that choosing a life's work was largely a matter of chance; or, if some deliberation was given to it, the choice was made at a particular point in time, usually when leaving high school. It was assumed that there were few, if any, decisions leading up to the actual choice and no consequences of importance following it.

However, this cross-sectional view of career choice has been challenged in recent years by recognizing the fact that selecting an occupation is a process which spans a considerable number of years, usually from late childhood into early adulthood. The process of vocational development has been further analyzed as unfolding along several distinct, but interrelated, dimensions. These include:

- consistency of career choice over time;
- realism of career choice in relation to personal capabilities and employment opportunities;
- career choice attitudes;
- career choice competencies.

Because these latter two dimensions of career development have not been previously measured, the CMI was designed to provide a relevant and convenient inventory of them. To assess the maturity of these career behaviors, as the young person grows up during the choice years, the CMI provides two types of measures: the Attitude Scale and the Competence Test.

The Attitude Scale elicits the feelings, the subjective reactions, the dispositions that the individual has toward making a career choice and entering the world of work. Is work seen as a meaningful focus of life or is it viewed as drudgery? How involved and independent is the individual in the choice process? What considerations are made in selecting a career? These and other conative aspects of decision-making are stated in the items of the Attitude Scale as they have actually been verbalized by young people. More specifically, five attitudinal clusters are surveyed:

- involvement in the career choice process;
- orientation toward work;
- independence in decision-making;

- preference for career choice factors;
- conceptions of the career choice process.

In contrast, the Competence Test measures the more cognitive variables involved in choosing an occupation. These include: how well the individual can appraise his job-related capabilities (strengths and weaknesses); how much he/she knows about the world of work; how adept he/she is in matching personal characteristics with occupational requirements; how foresightful he/she is in planning for a career; and how effectively he/she can cope with the problems which arise in the course of career development. In all then, there are five parts to the Competence Test:

- Self-Appraisal (Part 1: Knowing Yourself)
- Occupational Information (Part 2: Knowing About Jobs)
- Goal Selection (Part 3: Choosing a Job)
- Planning (part 4: Looking Ahead)
- Problem Solving (Part 5: What Should They Do?)

There is a good reason to identify those who are career-immature as early in the decision-making years as possible. The Attitude Scale and Competency Test can be used for this purpose as screening instruments and as normative standards. Each student's degree and rate of career development can be determined. "Degree" is simply the student's raw score on the scales, but it indexes how much progress has been made along the continuum of career development in adolescence, since relatively higher scores indicate greater similarity to the responses of the standardization sample. "Rate" is derived from the student's percentile rank with reference to others at the same grade level and can be used to screen those who are immature in their career development. In general, those in the lowest quarter (at or below the twenty-fifth percentile) can be considered as possibly delayed or impaired in their career development and can be invited to participate in some facilitating experience.

Students above the twenty-fifth percentile are most likely progressing normally in their career development.

RESULTS

The results of the testing are presented in Table 1 and 2. Table 1 summarizes the statistics for the CE+ sample group as compared to the norm group or standardization sample of the CMI. On four of the five Competency Scales, the CE+ group scores higher than the norm when the means are compared. Only on Goal Selection do these students score lower. As for the percentiles, the CE+ sample scores higher than the norm group on all comparisons across the 25th percentile. Fewer students in the CE+ sample score below this percentile than in the norm group, indicating higher performance scores on the scales for the standardization sample. On the Attitude Scale, the CE+ students do not perform as well as the norm group on all comparisons, indicating that these students scored lower than the norm population. Additional work in providing proper attitudes would probably be warranted.

In relation to these attitudes, Table 2 summarizes the students' responses to 12 selected items from the Attitude Scale. Four items among these indicate harmful or negative attitudes. A disproportionate percentage of students agree to the following statements.

2. A person can do any kind of work he wants as long as he tries hard.
5. I don't know how to go about getting into the kind of work I want to do.
6. It's probably just as easy to be successful in one occupation as it is in another.
3. I know very little about the requirements of jobs.

Agreement with these items would seem to indicate that students do need more help or work on developing knowledge and awareness in career education.

TABLE 1

MEANS, STANDARD DEVIATIONS, AND PERCENTILE
FOR NORM GROUP AND CE+ SAMPLE
ON SIX TESTS

TEST		NORM GROUP	CE+ SAMPLE	
ATTITUDE SCALE	Mean	35.31	32.77	Below
	SD	5.28	5.01	
	50%	35	33	
	25%	31	30	Below
SELF APPRAISAL	Mean	12.06	12.55	Above
	SD	4.81	3.99	
	50%	13	13	
	25%	9	11	Above
OCCUPATIONAL INFORMATION	Mean	12.23	13.13	Above
	SD	5.04	4.44	
	50%	13	15	
	25%	9	11	Above
GOAL SELECTION	Mean	11.12	10.89	Below
	SD	5.56	4.28	
	50%	13	12	
	25%	6	8	Above
PLANNING AHEAD	Mean	9.86	9.91	Above
	SD	5.60	4.43	
	50%	10	10	
	25%	5	6	Above
PROBLEM SOLVING	Mean	7.54	8.68	Above
	SD	4.50	3.54	
	50%	7	8	
	25%	3	6	Above

TABLE 2

SELECTED ITEMS FROM ATTITUDE SCALE AND PERCENTAGE OF STUDENT AGREEMENT

	ITEM	PERCENTAGE
1.	I guess everybody has to go to work sooner or later, but I don't look forward to it.	16%
2.	A person can do any kind of work he wants as long as he tries hard.	67%
3.	Your parents probably know better than anybody else which occupation you should enter.	16%
4.	Work is dull and unpleasant.	9%
5.	I don't know how to go about getting into the kind of work I want to do.	44%
6.	It's probably just as easy to be successful in one occupation as it is in another.	39%
7.	I seldom think about the job I want to enter.	16%
8.	I know very little about the requirements of jobs.	35%
9.	There is only one occupation for each person.	7%
10.	You get into an occupation mostly by chance.	14%
11.	I have little or no idea of what working will be like.	18%
12.	You should choose an occupation, then plan how to enter it.	90%

G. STAFF EMPLOYMENT AND UTILIZATION:

1. The career education local coordinator left the program for employment in the business industry. The new coordinator is Bruce Walker who had been involved in writing the project proposal. A copy of his personal data sheet is included in Appendix K of the November 30, 1978, Quarterly Report.

2. The Learning Aide for the project at the end of last year has taken a position at the Head Start Program in Minot. The new Learning Aide is Lonna (Jodi) Munsch. Her personal data sheet is in Appendix L of the November 30, 1978, Quarterly Report.

3. The CE+ program has maintained the entire staff throughout the 1978-79 school year. This has resulted in a smooth and consistent program.

H. STAFF DEVELOPMENT:

1. On September 20-21, 1978, the Department of Public Instruction held a statewide Career Education conference in Bismarck. The local coordinator attended this conference.

The purpose of this meeting was to acquaint educators with national and state career education, and career guidance trends. Dr. Kenneth Hoyt, Associate Commissioner of Career Education for the U.S. Office of Education, spoke about legislation affecting the career education movement. He asked for assistance from the community in educating our students. He also said we must provide for each child the knowledge to be able to move from school to the world of work.

Business and industry also had representatives who spoke about the education strategies for their particular companies. They also told what type of educational background they are expecting from students when they graduate from school.

Dr. Thomas Clifford, President of the University of North Dakota, spoke about how higher education is attempting to work with the secondary schools and industry in this area of career education.

2. On October 13, 14 and 15, 1978, Peg Portscheller attended a conference on humanistic education sponsored by the Human Development Training Institute of California. The three day workshop centered on group activities that could be used in classes of special areas such as drug education, career education, special education, etc., as well as traditional classes.

3. The Local Coordinator participated in an Educational Equality Workshop on January 24-27, 1979, which was sponsored by the North Dakota State Board for Vocational Education. The general format included basic presentations, general discussions and development of strategies.

The workshop included the implications of sex bias, and recognized cultural, ethnic and economic variations in patterns of stereotyping.

4. David Kjos, CE+ Learning Manager and Resource Specialist, attended the Third Annual EBCE National Network conference the 19, 20 and 21 of February in San Antonio, Texas. While there he took in sessions on a variety of subjects relating to EBCE.

The sessions dealing with the monies available for the continuation of EBCE programs as well as the information gained in closing out the project and final reports were of special interest. Mr. Kjos attended sessions on various adaptations of the CE+ concept made by school districts as well as community site analysis.

A Title IX Equity Workshop was held in Bismarck, North Dakota, on March 30 and 31, 1979. Peg Portscheller, Student Coordinator, attended the conference which was sponsored by the North Dakota PTA, the North Dakota Commission on the Status of Women, and Project EQUAL of North Dakota State University.

Dave Kjos, Resource Specialist, attended an EBCE workshop in Minneapolis on June 21 and 22, 1979. The conference highlighted use of the community as a resource in and out of the classroom.

5. The CE+ Coordinator attended a EBCE regional meeting in Denver, April 19 and 20, 1979. There were representatives from Montana, Utah, South Dakota, Colorado and North Dakota present.

One of the main purposes was to assist the projects in closing out their final year. Earl Dodrell, Sr., Program Officer of USOE was there on the morning of the 19th and answered questions.

The projects were given an opportunity to present some of their materials and procedures used. This was an excellent opportunity to share positive and negative aspects of each program.

6. On May 10, 1979, the Employment Development Division held a technical assistance session for those school districts interested in applying for funds for the 1979-80 school year. The project director attended this session and one held on May 11, 1979, by the Department of Public Instruction.

These sessions were designed to help school districts understand what types of proposals are acceptable for the Youth Employment Training Program.

7. On August 2 and 3, 1979, the local coordinator and one staff member attended a CETA workshop in Denver, Colorado. The workshop was sponsored by Kirschner Associates under a grant from the office of Career Education of USOE.

The emphasis of the sessions centered around YETP programs and fitting them into the educational system.

SUMMARY OF THE REPORT

A. TIME PERIOD COVERED

The time period covered by this report is from September 1, 1976 through August 31, 1979.

B. GOALS AND OBJECTIVES

Through the CE+ Project students will benefit from a two-fold objective; that of strengthening the relevancy of education, and that of obtaining a more realistic picture of the business and labor structure of their community.

Career Education Plus will help bridge the gap between school and work by providing experiences that will help students realize the relevancy of subjects in their curriculum. Students participating in work experience in the community will see the reasons behind the subjects they are taking and the skills obtained through these subject areas.

Another objective will be to lower the level of youth unemployment in the Minot community. Through exposure to the community work base, students will have a more realistic understanding of what exists in the world of work. Employers, on the other hand, will realize the great potential of youth as employees. They will also benefit by seeing that students from all backgrounds and of all abilities can serve as useful employees if given the opportunity.

The project is designed in part to serve those students with academic, socioeconomic, and physical handicaps. These groups, a all others involved in the project, will be exposed to the advantages of their education as a vehicle to improve their economic situation, their social standing in the community, their abilities individually, and in the case of the physically handicapped, their usefulness in jobs that are available to them.

The project will attempt to bring to the student the role of economic independence and self-reliance in the adult world through the process of decision-making and preparation that leads to this role of independence.

It is also a goal of CE+ to bring public education closer to such manpower agencies as Vocational Education, Job Service and other manpower agencies. The cooperation between these manpower bodies and the local district is necessary for harmonious implementation of the project.

The societal objectives of career education are to help all individuals to: (1) want to work, (2) acquire the skills necessary for work in these times, and (3) engage in work that is satisfying to the individual and beneficial to society.

C. RESULTS: ACCOMPLISHMENTS

The overall conclusion of the implementation evaluation for the program was that the project was functioning efficiently and effectively and was following the intent of the original CE+ proposal.

The process evaluation consisted of three parts: Basic Skills, Life Skills, and Career Skills. It is summarized for the three years on the following table.

	First Year	Second Year	Third Year
1. Objectives: Basic Skills			
a. Improvement in Reading Skills	not attained	partial (25%)	partial (25%)
b. Improvement in Oral Communication Skills	attained	attained	attained
c. Improvement in Writing Skills	attained	attained	partial (90%)
d. Improvement in Basic Quantitative Skills	partial (50%)	partial (50%)	partial (63%)
2. Objectives: Life Skills			
a. Satisfactory Completion of Projects	partial (90%)	partial (85%)	partial (90%)
b. Satisfactory Completion of Competencies	partial (83%)	partial (77%)	partial (44%)
3. Objectives: Career Skills			
a. Development of Career Knowledge	partial (40%)	not attained	partial (33%)
b. Development of Self-Knowledge	not attained	not attained	partial (50%)
c. Career Explorations	attained	attained	partial (92%)

The product evaluation focused on the terminal objectives and the perceptions of parents, students and employers. The following Product Evaluation Summary reported the three year project results.

PROJECT EVALUATION SUMMARY

The product evaluation focused primarily on the sic terminal objectives that were assessed yearly:

1. Objectives

		First Year	Second Year	Third Year
a.	Students in the program will acquire basic academic skills at least equal to their counterparts in a traditional program.	attained	attained	partial (88%)
b.	Students in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program.	not attained	partial (33%)	not attained
c.	Students in the program will show more positive attitude toward work than a traditional program.	not attained	not attained	not attained
d.	Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program.	not attained	not attained	not attained
e.	Students in the program will demonstrate a higher level of career decision making skills, job-hunting, and job-getting skills than students in a traditional program.	partial (33%)	partial (56%)	partial (28%)
f.	Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program.	partial (67%)	not attained	partial (50%)

D. EVALUATION

The overall conclusion of the implementation evaluation for the three years of the project cycle was that the CE+ project has followed the original intent and design of the CE+ proposal with its yearly revisions.

E. CONCLUSIONS AND RECOMMENDATIONS

It is the overall conclusion of the evaluation that the perceptions of this program by students, employers and parents are for the most part positive. The project appears to be attaining its objectives, especially in the area of diversity of job explorations. The project was functioning effectively and has accomplished the intent of the original CE+ proposal.

The only recommendation is that the project staff address the weaknesses identified in the Final Evaluation Report.

BODY OF REPORT

A. ACCOMPLISHMENTS

Program or Project Purpose (as extracted from original proposal): The proposed program will offer a fundamentally different type of education for secondary students. Activities will be tailored to individual needs, abilities, learning styles, and goals in order to enhance the students' self development, civic responsibility and economic awareness. Students will be guided in their learning through on-going relationships with a variety of working adults in the community. This kind of relationship involving a total cross section of students and adults will help bridge the gap between school and earning a living and provide more occupational opportunities for growth, thereby reducing the level of youth unemployment. This program will necessitate close cooperation between public education and manpower agencies in order that the students learn how to learn, how to plan learning activities, how to find and use resources in the community and how to build on experience. Learning will become, for each student, a lifelong process with its own rewards directly related to each individual's personal choices and goals.

The proposed in-school cluster program utilizing Experience Based Career Education strategies for the Minot, North Dakota School District will follow the Vocational Education amendments of 1968, Public Law 90-576 to the extent that the district will acquaint students with occupational choices and will provide teachers the opportunity to become acquainted with the in-school cluster approach and strategies of Experience Based Career Education. All tenets of the above mentioned amendments will be followed.

Through the proposed program in Minot, North Dakota Public School District #1 a major objective will be to lower the level of youth unemployment in the Minot community. Through exposure to the community work base, students will have a more realistic understanding of what exists in the world of work. Employers, on the other hand, will realize the great potential of youth as employees.

The proposed program will bridge the gap between school and work by providing experiences that will help students realize the relevancy of subjects in their curriculum. Students participating in work experience in the community will see the reasons behind the subjects they are taking and the skills obtained through these subject areas.

Public education will be brought closer to such manpower agencies as Vocational Education, Vocational Rehabilitation, and the State Employment Security Bureau. The cooperation between these manpower bodies and the local district is necessary for harmonious implementation of the project.

Through this project, students will benefit from a two-fold objective, that of strengthening the relevancy of education, and that of obtaining a more realistic picture of the business and labor structure of their community.

The Minot, North Dakota project will be designed in part to serve those students with academic, socioeconomic, and physical handicaps. These groups, as all others involved in the project, would be exposed to the advantages of their education as a vehicle to improve their economic situations, their social standing in the community, their abilities individually and, in the case of the physically handicapped, their usefulness in jobs that are available to them.

Employers also would benefit as they would see that students from all backgrounds and of all abilities can serve as useful employees if given the opportunity.

In accordance with the Vocational Education Amendments of 1968, Public Law 90-576, the in-school cluster approach of EBCE would serve to acquaint students with occupational choices in their community, along with the education needed to take advantage of these choices. The Minot, North Dakota School District #1 and the community at large is prepared to meet these requirements.

Students need to be brought to the role of economic independence and self-reliance in the adult world through the process of decision making and preparation that leads to this role of independence.

The societal objectives of career education are to help all individuals to: (1) want to work, (b) acquire the skills necessary for work in these times, (c) engage in work that is satisfying to the individual and beneficial to society.

The need arose out of the career education activities of the junior high school. The junior high school program is a career awareness project aimed at exposing students to the career choices available in today's world of work. The advisory committees to the junior high career program and the vocational areas have advised the school district officials that exploratory activities are essential. Students who are gaining career awareness are now seeking experience on-site to determine if their abilities and personal resources meet the demands of the occupation or career that they have chosen to explore.

The statement of need is evidenced on the local level by pre and post testing given to eighth grade students in the career awareness project.

The results of the survey indicate that some of the career needs relating to junior high school students are being partially satisfied.

A statewide survey supports the need for Experience Based Career Education, a descriptive summary follows:

The North Dakota Association of Student Councils through a North Dakota Vocational Education grant surveyed 7,465 11th & 12th grade students from 62 North Dakota Public Schools for the following purposes:

1. Survey and analyze the opinion of the secondary students in the state of North Dakota toward this knowledge of career and occupational information.
2. Determine if public secondary education is giving adequate career and occupational information to students.
3. Determine where students were learning about careers.

Descriptive Summary: Over one-third of the respondents indicated a desire to go to a four-year college. One-fourth felt that they would go to some type of vocational school and one-fifth said that they would go to work. Two-thirds of them indicated that these plains were definite or very definite.

One-third of the students indicated that the teachers do not talk often about different jobs. Half of the students said that the teachers "sometimes" talk and another 40% said the teachers "hardly ever" talk.

Students indicated various ways in which they become aware of various occupations. Half of the students got this awareness through school courses or personal observations of work. About 40% of the students got some career awareness through: speakers, films, part-time work, and television. Fewer students became aware through: newspapers, career days, field trips, and publications. The smaller percentages (about one-sixth of the students) were indicated for teacher visits and rap sessions.

Over half of the students indicated that they now hold a part-time or full-time job. Eighty-two percent have held a job at one time. Only 13% said that the school had helped them to get a job. They indicated that the best help in securing work had come from friends, parents, and people in the "other" category.

A high percentage of students selected the counselor as the person with whom they would like to talk about future plans. About half of the students indicated that the counselor had already talked to them about future plans.

Most students thought that their present school work would be helpful in choosing a later career. Most indicated however, that their teachers had not talked to them individually about getting a job, attending a four-year college, or getting vocational training. Yet, they did feel that the teachers discussed the various occupations which are related to school subjects.

Over half of the students felt that the school had helped them to consider information about themselves as it relates to their future plans. Most of the students rated the school as "somewhat" successful in making them aware of continued changes in the world of work.

An experience component is needed to bridge the gap between awareness to vocational training.

Following are the final outcome objectives as specified in the proposal:

1. Students who participate in the program will acquire basic academic skills which are at least equal to their counterparts in a traditional program.
2. Students who participate in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program.
3. Students who participate in the program will show a more positive attitude toward work than a traditional group.
4. Students who participate in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program.
5. Students who participate in the program will demonstrate a

higher level of career decision-making skills, job-hunting and job-getting skills than students in a traditional program.

6. Students who participate will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program.

7. Students who participate in the program will have a higher level of satisfaction with themselves, with their choices of education or work than will students in a traditional program.

8. Students who participate in the program will be more likely to select career areas for exploration, for their career goals, or for career preparation which are different than those normally expected for their sex-role than will students in a traditional program.

9. Students who participate in the program will be more likely to select appropriate vocational programs and find more meaning and importance associated with developing vocational skills.

10. Students who participate in the program will have job-entry skills which will permit them a choice of a job, further education or both in a cluster program area of their choosing.

Some consideration has been given to the long range impact of the project. Objectives 7, 8, 9 and 10 are geared more to this level since the grade 9 and 10 students will be making final choices about their future plans for education at this time, or selecting career areas or goals, or vocational programs. These objectives tend to be terminal objectives beyond the scope of the three year cycle and for these reasons objectives 7, 8, 9 and 10 were not evaluated.

The primary data analyses undertaken for this aspect of the product evaluation was analysis of covariance which compared the experimental group with the control group on the proper dependent variable with a pretest of that variable used as the covariance. In this manner both groups were statistically controlled and treated as if they were equal on the variables at the outset of the project, controlling for any contaminating effects because of the potential original differences between the groups.

Objective 1: Students in the program will acquire basic academic skills which are at least equal to their counterparts in a traditional program (control group). The basic skills dependent variables were the Reading Comprehension, Arithmetic Concepts, Arithmetic Applications Subtests of the Comprehensive Tests of Basic Skills. Both raw scores and percentile scores were used in these comparisons.

On 16 of the comparisons there were not significant differences between the experimental group and the control group. On two comparisons, grade 9 Arithmetic Applications Raw Score on full group Arithmetic Applications Raw Score, the control group scored significantly higher than the experimental group. The project, however, has accomplished this goal because the experimental group is equal to or greater than their counterparts on 16 of the 18 comparisons.

Objective 2: Students in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program (control group). The study skills dependent variables were the Study Skills: References and Graphic Subtests of the Comprehensive Tests of Basic Skills. Both raw scores and percentile scores were used in these comparisons.

On all 12 of the comparisons there were no significant differences between the experimental group and the control group on the Study Skills Subtests in favor of the experimental group. The project has not accomplished this objective, since there are no differences between the two groups in favor of the program.

Objective 3: Students who participate in the program will show a more positive attitude toward work than a traditional group (control group). The dependent variable for this analysis was the Attitude Subtest of the Assessment of Career Development.

On all of the comparisons there were no significant differences between the two groups on Career Attitude in favor of the experimental group. The project has not accomplished this objective, since there are no differences between the two groups in favor of the program.

Objective 4: Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program. These dependent variables are the Self-Awareness and Knowledge Subtests of the Assessment of Career Development. Only raw scores were available. On all 6 comparisons there were no significant differences between the experimental group and the control group in favor of the experimental group. The project has not accomplished this goal, because there are no differences between the two groups in favor of the program.

Objective 5: Students in the program will demonstrate a higher level of career decision-making skills, job-hunting and job-getting skills than students in the traditional program (control group). The dependent variables for these analyses were the Career Activity, Career Planning, and Career Exploration Subtests of the Assessment of Career Development. Only raw scores were used in these comparisons.

Of the nine comparisons, seven showed no significant differences. However, 2 (grade 9, Activity and Full Group, Activity) comparisons were in favor of the experimental groups. CE+ students did better than the other students on these comparisons. The project has only minimally accomplished this objective.

Objective 6: Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program (control group). The dependent variable for this analysis is the School Subtest of the Assessment of Career Development. The raw score was used in this comparison.

On two comparisons, there are no differences. For grade 9, the experimental group scores higher than the control group. The project has only partially accomplished this objective.

B. MAJOR ACTIVITIES AND EVENTS (1976-1978)

The Minot school board has been apprised of the Career Education Plus program through meetings with individual board members and periodic presentation to the full board by the CE+ staff.

To better acquaint parents to the CE+ program, the staff has held parent orientation sessions at the beginning of each semester. The program included the various students activities, goals and objectives of the program. Orientation sessions have also been held with students, administrators, employer instructors, service clubs, the CE+ Advisory Board, and the school faculty; to provide them with a good overall grasp of the various components of the program. As a supplement to the program, a slide/tape presentation was developed by the CE+ staff.

Information on the program was made available to all 8th and 9th grade students through participation in the annual mini-fairs at Central Campus High School and the three junior highs in the Minot School District.

On a broader level, the CE+ staff sponsored a statewide Career Education conference in November, 1977. Forty-six educators from across the state registered for and attended the conference. The CE+ Advisory Board has expanded during this period and has made invaluable contributions to the program during their bimonthly meetings.

Major Activities and Events of 1978-79 are found on pages 4 through 10 of this report.

C. PROBLEMS

Even though the Career Education Plus classes for the 1977-78 school year were adequately filled, the staff endeavored to ascertain why student registration hadn't been higher. The results of a survey revealed the three hour time block seemed to be causing the hesitation in enrollment. CE+ could be the only elective course taken due to the number required courses. Changing the class time to a two-hour time block resulted in a far greater enrollment for the 1978-79 school year. The program was also held in the summer for students who were not able to take CE+ during the regular school term.

Due to the lack of transportation, the job sites available for student exploration was limited to the downtown Minot area; thus placing a definite limit on any variety in career fields. A leased car was made available to the CE+ program enabling transportation of students to the community at large. This has allowed students a full spectrum of exploration options; including many in the construction, agricultural and communication clusters.

It seemed the CE+ program was attracting a disproportionate number of average and below average students. As these students are perhaps not the most optimum influencial factor for other students, administrators, counselors, and the school staff, the CE+ staff was concerned this situation would continue. An attempt to alleviate the problem has been made through workshops and counseling sessions with various educators and the student body.

D. PUBLICITY ACTIVITIES:

The Career Education Plus staff has printed various publications throughout the years. A brochure, describing the CE+ program, was distributed to employers, service clubs and educators in many school systems throughout the state. Also, the staff developed a monthly newsletter describing various student and project activities. This was mailed to approximately 1000 parents, educators, students, employers and other interested persons.

The Career Education project has enjoyed extensive coverage in the Minot Daily News. Articles were printed on the awarding of the grant, the presentations made to various service clubs, and a feature article on the project in its second year of operation. There were also articles covering CE+ summer school and the Career Education Conference sponsored by the CE+ staff.

Quite a number of educators and businessmen have toured the CE+ project. Representation of schools across North Dakota, South Dakota and Canada have visited the learning center and met with the staff members. Members of the State Board for Vocational Education and the Department of Public Instruction have also toured the CE+ center and been kept informed of the activities and accomplishments of the project. Furthermore, students, from Minot State College, have been given tours of the facility and have discussed the CE+ concept with staff members.

E. DISSEMINATION ACTIVITIES:

The following dissemination activities were part of the first year activity:

1. Dissemination of CE+ brochures and accompanying letter of explanation was addressed to all North Dakota State Board for Vocational Education staff members.

2. A dissemination of the CE+ brochure included all administrators, principals, counselors, local vocational directors and Region VIII Part D Project Directors.

3. Newsletter articles about CE+ were included in the October, 1976, and February, 1977, issues of the North Dakota Career Education Newsletter. The April issue of Career Development In North Dakota newsletter included an article about the CE+ project. The newsletter is mailed to over 2,200 North Dakota educators.

4. On September 20, 1976, a meeting was held with Mr. Dave Birchem, Area Director, U.S. Department of Labor, Wage and Hour Division. A copy of the CE+ proposal was left with him. Discussions centered around the CE+ project cooperation with the Wage & Hour Division and the implications that the project may have pertaining to regulations issued by Mr. Birchem's office.

5. CE+ staff disseminated program information along with personal visits to the following schools in North Dakota: Makoti, Harvey, Palermo, Columbus, New Salem, Hebron, Cooperstown and Northwood.

6. A letter of invitation to attend the National Conference "Increasing the Impact of Innovative Projects" at Fort Worth, Texas, was sent to approximately 60 North Dakota teacher educators.

7. Continual contact was maintained with the Region VIII Exemplary projects via sharing materials produced, letters and memos and all reports. Such letters and memos substantiating coopera-

50

tion and contact with our Region VIII counterparts are on file in the project director's and local coordinator's offices.

8. An article describing the Career Education Plus project was included in the North Dakota Vocational News. This is an official duplication of vocational and technical education. The publication is sent to over 2,000 individuals including secondary and post-secondary instructors, the Department of Public Instruction, local vocational directors and superintendents.

9. Brochures and materials from the CE+ project were shared with an education class at Mary College in Bismarck, North Dakota.

10. An area school career education workshop was held in Jamestown, North Dakota, on March 30, 1977. Materials (brochures) were distributed to the participants.

11. Copies of the quarterly reports were distributed to all Region VIII Part D Project Directors and to the Area Director, U.S. Department of Labor, Wage & Hour Division.

12. CE+ materials and information were distributed to schools upon request.

13. Career Education Plus materials and information were sent to the Northwest Regional Educational Laboratory in Portland, Oregon.

14. Workshops that included a CE+ program presentation were conducted during the first quarter. The sites of the workshops were Wishek, Mandan (St. Joseph's School) and New Salem.

15. A brief presentation of the CE+ program was made at a liaison meeting between the Department of Public Instruction and the State Board for Vocational Education.

16. Dissemination of the CE+ brochure and a program presentation of the CE+ program was made at a joint meeting of the State Board for Vocational Education staff, Minot administrators and the Minot vocational teachers. The presentation was part of the State Board for Vocational Education's three day technical assistance visitation of the Minot school system's vocational programs.

17. A presentation was given at the National Conference of the American School Counselors Association (ASCA) during the American Personnel & Guidance Association (APGA) National Convention. The convention was held during the week of March 6-9, 1977, in Dallas, Texas. CE+ materials were distributed.

18. A presentation was given to the Philosophy of Vocational Education class being taught for area vocational personnel at Williston, North Dakota. Materials were distributed.

19. A presentation on the goals and progress of Career Education Plus was given to a Minot State College class. The class is part of a vocational education course and is entitled Coordination of Cooperative Programs. The class members in attendance were provided copies of the project's brochure and latest newsletter.

20. Service club presentations on Career Education Plus were delivered. The objectives were to inform the community about the project and also solicit prospective employers for participation. The clubs attended were: Exchange Club, Rotary Club, Kiwanis Club, Minot Lion's Club, Sertoma Club, Hooterville Lion's Club, Magic City Lion's Club and the Inter Agency Council.

21. A CE+ presentation was made at the annual Vocational Educa-

tion All Service Conference in Bismarck, North Dakota. Vocational guidance counselors from around the state received information and materials about Career Education Plus.

The following dissemination activities were part of the second year's activity:

1. A statewide career education conference was held in Bismarck, North Dakota on September 27 and 28, 1977. Individuals from business, industry, labor, government and education attended the conference. The State Coordinator of Career Education hosted the meeting.

The objectives of the conference were aimed at bringing education and the community together to discuss career education. Those that attended the conference had the opportunity to learn the educational goals being prepared for career education, react to the goals and express their views and opinions.

The local coordinator of the CE+ project was a presenter at the conference. A one hour session was held for approximately 15 interested participants on the local CE+ Experience-Based Career Education Project. Project curriculum and guides as well as brochures and newsletters were distributed to the individuals present at the session.

2. On October 18, 1977, the CE+ project mailed a packet of materials to 258 school districts in the state of North Dakota. The packets were addressed to the superintendent of each district. Included in each envelope were the following items: a CE+ Explora-

ation Guide, a Competency Workbook, and a Student Handbook. Copies of these materials were included in the interim report.

Additional materials in the packet pertained to the November Career Education Conference. The following informative materials were included: a copy of the conference agenda, a cover letter and a pre-registration form.

3. Copies of the conference materials were also locally disseminated to the following recipients: school board members, CE+ advisory board members, the local parochial high school and Minot State College. Of course, information was provided for Minot school district educators.

4. A presentation of the Career Education Plus program was made to the Governor's Manpower Services Council by the CE+ Student Coordinator on October 27, 1977. Approximately 100 people were in attendance representing governmental agencies, business and labor.

Information shared with the group included background of the program, curriculum, student selection, evaluation procedures, community participation and staffing. A question/answer period followed.

5. Copies of the CE+ newsletter "The Explorer" were mailed to the Northwest Regional Educational Laboratory. Information from "The Explorer" could then be used for dissemination in the NWREL newsletter "EBCE Update."

6. Career Education Plus became part of the National Rural Career Guidance Communication Network of Las Cruces, New Mexico in December, 1977. A copy of the CE+ abstract and brochure were forwarded

to New Mexico for further explanation of the project.

7. Letters were sent out to all local service clubs informing them about the CE+ program. The Local Coordinator made presentations at the various meetings upon request.

8. CE+ program activities were discussed by phone in a survey of EBCE sites initiated by the Huron Institute from Cambridge, Massachuusetts.

9. A survey form on CE+ was completed and sent to the Appalachia Educational Laboratory in Charleston, West Virginia. The questionnaire was designed to gather information on the tasks of persons involved in some aspect of working with the community as a part of their program and job responsibilities.

10. At the request of the Curriculum Specialist, Division of Vocational and Technical Education in South Dakota, materials were forwarded concerning Career Education Plus. Information on parent, student and employer-instructor evaluation forms for EBCE was sent to South Dakota. Permission to use or modify the forms to fit their needs was granted.

11. The CE+ staff participated in completing a questionnaire on the project in conjunction with BICEP (Business Industry Community Education Partnership) located in Salt Lake City, Utah. The survey dealt with the following criteria:

a. The program is an ongoing, coordinating, linking agency between schools and the community.

b. A major function of the program is career awareness, career exploration, career decision-making, or unpaid career training.

c. The agency assists in arranging interaction activities which include career resource people coming into the classroom and/or students visiting work sites.

The survey will serve as a means of program exchange among directors of similar projects.

12. Student Project booklets were developed and disseminated. All 251 school districts in North Dakota were provided a copy of this curriculum booklet. Sample student projects were available to interested educators to adapt to their particular needs and wishes.

13. A questionnaire was completed and sent back to Ithaca College, Ithaca, New York. The survey dealt with how alternative programs work when they share facilities with other more traditional programs.

14. Materials, including the Student Handbooks, Career Exploration Guides, and Project Workbooks from the CE+ project, were sent to participants in the NWREL Conference in Denver who requested information. The areas of the country receiving the materials included: Wyoming, Missouri, Idaho, Nebraska, Texas, Nevada, Oregon, Virginia, Washington, and Michigan.

The Dissemination Activities of 1978-1979 are found on pages 13 and 14 of the 3rd year report.

F. PROGRESS ON DATA COLLECTION AND EVALUATION PLANS AND PROCEDURES: (Dr. Laundry's report)

FINAL REPORT

Evaluation of Career Education Plus

by

Dr. Richard G. Landry

University of North Dakota

57

INTRODUCTION

It is expedient at the outset to reiterate rationale underlying the final evaluation of this project. Evaluation is intrinsically an action-related process in the sense that an action referent is implied in every evaluation activity. Something is to be evaluated; the evaluative data are to be used for some purpose. That purpose always involves a decision of some kind, a question to be answered. Does a given program attain its objectives? What are the weak areas of a project? What aspects should be changed or deleted?

In the past 10 years, substantial progress has been made toward an appropriate definition for evaluation. Scriven and Stake have espounsed the distinction between formative evaluation (evaluation concerned with program improvement) and summative evaluation (evaluation concerned with determining overall effectiveness). Stufflebeam has distinguished between process evaluation which serves to implement decisions to control project operations and product evaluation which serves to recycle decisions to judge and react to project attainments. It is this latter twofold evaluation (process and product) which characterizes the present evaluation scheme.

The evaluation report as a whole will have these seven major subdivisions:

I. Description of Project and Site

II. Evaluation Rationale

III. Implementation Evaluation of Management Plan

IV. Process Evaluation: Life Skills, Basic Skills and Career Skills

V. Product Evaluation: Student Outcomes and Parents', Students' and Employers' Perceptions

VI. Summary

VII. Overall Evaluation for Three Years

These seven subdivisions follow the evaluation design as submitted with the original project.

Chapter I

Description of Project and Site

1. Project Title: Career Education PLUS (CE+)

2. Location: Minot, North Dakota

3. Source and Level of Funding:

   Contract Period

   Completed

4. Program Operations Start Date: September 1977

5. Brief Description of Project

CE+ is an alternative education program that provides career education learning opportunities for young people in Grades 9 and 10. The general goals of the program, procedures and outcomes can be summarized below.

STATEMENT OF OBJECTIVES: The generalized objective of this secondary alternative education project are: (1) to provide for competencies in the basic skills required for adaptability in our rapidly changing society, (2) to provide opportunities to enhance good working habits, (3) to provide a means for evaluating good work values that foster in them a desire to work, (4) to provide an opportunity to become proficient in decision making skills, job-hunting skills, and job-getting skills, (5) to provide for an opportunity to explore the world of work thus creating an awareness of the options open to them, (6) to provide for specific training in job entry skills for those who do not have the opportunity in the traditional curriculum, and (7) to provide for continual guidance activity.

PROCEDURE TO BE FOLLOWED: The objectives of the project will be achieved through a series of related activities which include: (1) employment of staff members to coordinate the project activities in the school, community, and state, (2) selection, review, development and adapting appropriate materials, (3) provision of exploratory work experiences and opportunities to investigate clusters of occupations both in school and in the community, (4) intensive guidance activities to help in the elimination of sex bias and sex-role stereotyping, (5) programming in-service activities for students, parents, community and teachers (local and statewide), and (6) adapting existing Experienced Based Career Education strategies that will enhance the program.

EXPECTED OUTCOMES: Successful completion of this project will enable students to: (1) acquire basic academic skills which are at least equal to their counterparts in a traditional program, (2) demonstrate that they have developed study habits which are superior to those developed by students in a traditional program, (3) show a more positive attitude toward work than a traditional group and will, in stating personal values, indicate a desire to work, (4) demonstrate a higher level of self-awareness and career awareness than will students in a traditional program, (5) demonstrate a higher level of career decision making skills, job-hunting and job-getting skills than students in a traditional program, (6) have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program, (7) have a higher level of satisfaction with themselves, with their choices of education or work than will students in a traditional program, (8) to be more likely to select career areas for exploration, for their career goals, or for career preparation which are different than those normally expected for their sex-role than will students in a traditional program, (9) be more likely to select appropriate vocational programs and find more meaning and importance in actions associated with developing vocational skills, and (10) have job-entry skills which will permit them a choice of a job, further education, or both in a cluster program area of their choosing.

6. Context

CE+ is presently serving students primarily in grades 9-10, although the eventual targeted population are grades 9-12. The program has just completed its third and final year of total outside funding. The project is serving students in Minot, a medium-sized city in rural North Dakota. The program draws primarily from the Central Campus School (grades 9-10) which serves the total community. The program operates out of this building. The ethnic make-up of students is predominantly white. The individual students in the program represent all levels of ability and achievement. The pretest mean achievement scores of the CE+ students were within 10 percentile points of the median.

Chapter II

Evaluation Rationale

1. RATIONALE

The focus of the third-party evaluation of Career Education Plus (CE+) is the satisfaction of information needs both inside and outside the project and the school district. The evaluator intended to provide implementation and process information to the staff of CE+, the local administrators, the Advisory Board, and the State Department as to the strengths and weaknesses of the on-going program, so as to identify specific areas for change as the project is implemented for the second year. The second aspect, more objective and outcome oriented, deals with the assessment of what students have gained from participating in the program, and how well and to what degree the project has accomplished its student outcome objectives.

The specific areas to be evaluated and reported on include: (1) the staff's implementation of the management plan, (2) the process assessment of learning in the life skills, (3) the process assessment of student learning in basic skills and career skills, (4) the product evaluation of student terminal objective outcomes, (5) the perceptions of the effectiveness of the program by parents, participating employers, and project students, and (6) the comparison of the effectiveness of the three years of the project.

2. IMPLEMENTATION EVALUATION

In the implementation component of the evaluation, the concern was to provide periodic feedback to persons responsible for implementing plans and procedures. This evaluation had three main objectives: the first was to detect or predict defects in the procedural design, management plan, or their implementation during the implementation stages; the second was to provide information for programming and management decisions; and the third was to maintain a record of the procedure as it occurs. The audiences to whom this component of evaluation was mainly addressed were the project staff, local administrators and the Advisory Board.

3. PROCESS EVALUATION

In the process component of the evaluation, the concern was to provide periodic assessment of the process of learning that students were experiencing during the operational phase of the project. This phase was designed to discover the extent to which the program was achieving its process objectives in the areas of Life Skills, Basic Skills and Career Awareness. The feature of this component that distinguished it from the outcome evaluation is that the variables either were ones which did not figure among the set of criteria to be used in an outcome study (though one must think of them as important because of their relevance to improved methods) or they were only a sub-group or subset of such summative criteria. The main concern was process. The audiences to whom this component was addressed was the project staff, local administrators and the Advisory Board.

4. OUTCOME EVALUATION

In the outcome component of the evaluation, the concern was to measure and interpret at the end of a project cycle attainments of the student outcome objectives and to measure the impact of the project as perceived by parents of students, participating employers, and program students. This phase emphasized the provision of information regarding the general worth of the program as reflected by the outcomes it produced. Information regarding the extent to which the student outcome objectives have been achieved is obviously necessary and significant. This component presented information to decision-makers so they can determine whether a program should be eliminated, modified, retained, or disseminated more widely. The audiences to whom this component of evaluation was addressed were the local administrators, the Advisory Board, the State Office of Career Education, and the Federal Office of Career Education.

5. DESCRIPTION OF INSTRUMENTS

An effort has been made to use standardized, validated and acceptable criterion variables in the measurement procedure. It was decided to use the Comprehensive Test of Basic Skills, and the Assessment of Career Development.

The Comprehensive Test of Basic Skills (CTBS) has the subtests Reading Comprehension, Arithmetic Concepts and Arithmetic Application, and Study Skills and were used as criterion measures of outcome objectives 1 and 2. Useful baseline data was provided to the project in understanding the student's entry level of basic skills. By administering them as a post-test also, they served as a general change measure in basic skills and study habits.

The Assessment of Career Development (ACD) discussed in Evaluation and Educational Decision-Making: A Functional Guide to Evaluating Career Education and provided criterion measures for outcome objectives 3 through 6. The ACD (Houghton Mifflin) provided subscale scores for

Job Knowledge, Career Planning, Career Activity, Self-Awareness, Exploratory Experiences, and Career Planning Knowledge. These scales have been described more thoroughly in the Quarterly Reports.

Other assessment forms used were taken from the EBCE instruments provided by NWREL. The forms used were the Parent Opinion Survey, Employer Opinion Survey, Student Attitude Questionnaire and the Student Evaluation of Learning Site. These forms and the data are presented in the Appendices.

6. DESCRIPTION OF SAMPLE

Two general strategies were used to assess the attainments of the objectives: (1) pretest to post-test comparisons to measure growth over the duration of the cycle (for Process Objectives) and (2) traditional experimental and control group comparisons to measure the effect of participating in the project (Outcome Objectives). Most analyses were undertaken at three levels, i.e., within grade 9 comparisons, within grade 10 comparisons, and the full group comparisons.

The experimental group consisted of the 97 students who participated in CE+ program and completed both pretest and post-test. In this group there were 57 ninth graders and 40 tenth graders. Upper grade students were eliminated since there were too few to be handled statistical. In the tested group there were 46 males and 51 females.

The control group consisted of four classrooms (two 9th grade and two 10th grade) selected from the ninth and tenth grades. This group consisted of 66 students, of which 42 were ninth graders and 24 tenth graders with 30 males and 36 females.

All the data used for the standardized instrument comparisons were based on pretests and post-tests. The pretests were administered during the first two weeks of each semester of school and the post-tests in the final week of each semester. Not all test scores were available for all students because of schedule complications. The data analyses handled the problem of missing data. All other instruments were administered at the end of the third year cycle of the project.

Chapter III

Implementation Evaluation of Management Plan

1. PURPOSE

Implementation evaluation attempted to provide information on the degree to which the instructional program was actually being carried out in accordance with the intended plan. The necessity for monitoring the degree to which a program coincides with the management design and implementation objectives arises from the frequent departures from designs by those who carry out a program. Part of the evaluation component is a comparison of the description of the intended staff behaviors with a description of the observed behavior to ascertain the extent to which they are congruent. A finding of incongruence would indicate an adjustment in management plan or staff behavior or both.

2. STRATEGIES

There were three strategies to be followed in the implementation evaluation. The first was to identify and monitor continuously the potential sources of failure in a project. These included but were not limited to: understanding of and agreement with the intent of the program by persons involved in and affected by it, adequacy of the resources, physical facilities, staff, and time schedule, communication channels, and interpersonal relationships among staff and students, employers, parents and auxiliary personnel.

The second involved projecting and servicing project management decisions to be made by project staff during the implementation of the project. If the structuring management decisions have been specified clearly and implemented effectively, the evaluator should have little difficulty in delineating management decisions and their implementation.

The third strategy was to note the main features of the project design, such as clusters to be identified and employers to contact, and, in these terms, to describe what actually took place.

3. DESIGN OF IMPLEMENTATION EVALUATION

Three essential ingredients of an implementation design were regular meetings between the evaluator and project personnel, frequent updating of the evaluation design, and instruments for describing the implementation and management phases. The project staff simply did not have the needed combination of time, objectivity, and expertise to perform their own evaluation and their information requirements evolved through the life of the project.

The evaluator met periodically with the project staff and decision makers and discussed the project with program personnel to identify concerns and issues concerning management operations. The evaluator helped program personnel identify the questions which needed to be answered at the next feedback session; he summarized the data collection plan for the intervening period and asked the decision makers if it would provide them with the information they would need.

In collecting information, the evaluator relied on both formal and informal procedures--interviews, files, reports of staff meetings and updated management plans. While the evaluator focused on theoretically important variables and used systematic approaches to monitor them, he looked for any unanticipated but significant events.

4. RESULTS

The evaluator conducted trimonthly visits to the project from September, 1978, through May, 1979, the third year of implementation of CE+. The evaluation reports for these visits were included in the three Quarterly Reports: November, 1978; February, 1979; and May, 1979.

The overall conclusion of the implementation evaluation for the third year was that the project was functioning efficiently and effectively and was following the intent of the original CE+ proposal.

Chapter IV

Process Evaluation: Basic Skills, Life Skills, and Career Skills

A. PROCESS EVALUATION

1. Purpose: Process evaluation attempts to provide information on the degree to which the instructional program is effective in the internal progression of the teaching-learning situation. The primary focus is on the attainment of the student process objectives. The necessity for monitoring the degree to which a program has attained its process objectives enroute to the terminal outcomes arises from the fact that evidence can be provided to discover deficiencies and successes in the program and to document a continual record of behaviors toward the outcome objectives. The role of process evaluation stems from its relationship to implementation component whose focus is on staff and management development, process evaluation focuses on student development.

2. Strategies: There were three approaches followed in the process component of evaluation, focusing primarily on the three main areas of Basic Skills, Life Skills, and Career Skills. The main purpose was to identify potential areas of students failures in the project in relationship to the student process objectives as outlined in the proposal. This section of the evaluation is divided into these three components: Basic Skills, Life Skills, and Career Skills.

3. Design of Process Evaluation: The teaching-learning transaction includes the activities that produce change in the learner's knowledge, skills, attitudes, and awareness that achieve the ed-

ucational objectives. Some activities are shared by the staff and learner, and for some, the learner works along, with the employer, with classroom teachers and/or with resource center materials. The evaluation attempted to concern itself with these areas. The major purpose of process evaluation is to identify aspects of these transactions that can be improved.

B. PROCESS EVALUATION: BASIC SKILLS

1. Objectives: The objectives of the Basic Skills are as re-defined by the evaluator and the project had four major concerns and were stated as nearly as possible in behavioral terms. In this component, each objective will be analyzed and inspected separately.

2. Objectives: Reading Skills: The students who participate in the CE+ program will show a significant gain in reading skills on a standardized test. The students would be measured on a pretest post-test basis. The criterion measure for reading was the Reading Comprehension Subtest of the Comprehensive Tests of Basic Skills, published by the California Test Bureau of McGraw Hill Publishing Company. The raw score and percentile results for grade 9 and for grade 10 are presented in Table 1. The project did not attain its objective in this area, since there was only one significant gain on the Reading Comprehension Scale at the ninth grade level in raw score only.

3. Objective: Oral Communication Skills: The student in CE+ will demonstrate an ability to communicate orally both ideas and feelings in a manner that is effective and appropriate to various

Table 1

Means, Standard Deviations, and t-test Values on Reading Comprehension for Grades 9 and 10

		Pretest		Post-test			
		Mean	SD	Mean	SD	t-value	df
Grade 9	Raw Score	25.29	7.40	27.08	7.61	2.46*	51
	Percentile	45.04	25.49	45.62	24.81	.24	51
Grade 10	Raw Score	25.81	8.48	27.28	8.37	1.41	31
	Percentile	40.97	24.97	41.29	24.14	.10	31

*One-tailed test significant at the .01 level with these df's.

73

situations, as determined by the staff and employers in their daily communications with students. A second aspect of this objective was that the student will demonstrate an ability to listen effectively, as determined by the staff. This objective is evaluated with the Student Performance Review as developed by EBCE. The data are in Table 2. The mean rating for students over all the items was 4.23 which is significantly above the "commendable" level. The modal rating is 5.0 (Excellent). From these data, it can be concluded that the project attained this objective satisfactorily.

4. Objective: Writing Skills: The student in CE+ can express in writing ideas and feelings so that most people can understand what was stated, as determined by the staff and evaluation of projects. This objective was evaluated with the Zone Summary and Parent Report Form completed by the staff. The data are summarized in Table 3. The tasks were written and were judged to be satisfactory by the staff. Overall, the project was successful (90.4%) in attaining this objective.

5. Objective: Basic Quantitative Skills: This objective has two subobjectives: (1) the student will demonstrate an increased ability to comprehend and interpret information presented numerically as determined by a pretest post-test comparison on a standardized test, and (2) the student will demonstrate increased performance of arithmetic applications on a standardized test. The criterion instruments used to evaluate these subobjectives were the Airthmetic Concepts and Arithmetic Applications Subtests of

Table 2

Mean and Mode for Selected Items for Student Performance Review

	Mean	Mode
Attitude:		
Understands and Accepts Responsibility	4.33	5.0
Observes Employer's Rules	4.37	5.0
Shows Interest and Enthusiasm	4.12	5.0
Learning:		
Uses Initiative, Seeks Opportunities	3.97	5.0
Asks Questions	3.80	3.0
Uses Resources	4.01	3.0
Performance:		
Seeks Feedback	3.81	3.0
Accepts Feedback	4.27	5.0
Completes Tasks Assigned	4.19	5.0
Progressively Requires Less Supervision	4.27	5.0

Scale:
1 Needs to improve
2 Improving
3 Satisfactory
4 Commendable
5 Excellent

Table 3

Frequency and Percent of Students Completing Satisfactorily Writing Tasks

	At or Above Criterion		Number Criterion	
	Number	Percent	Number	Percent
Competencies	103	89.6	12	10.4
Projects	104	90.4	11	9.6
Explorations	106	92.2	9	7.8

the Comprehensive Tests of Basic Skills. The data for these comparisons are presented in Table 4. There was a significant increase from pretest to post-test on all 4 comparisons at grade 9 and on one comparison at grade 10. The project attained both subobjectives in this area for grade 9, but did not attain the subobjectives for grade 10.

C. PROCESS EVALUATION: LIFE SKILLS, PROJECTS AND COMPETENCIES

1. Objective: Life Skills: Projects: Each student was required in CE+ to complete five projects. The objectives of the projects varied from project to project and are too numerous and diverse to enumerate. An illustrative objective for the project in critical thinking will serve as an example. The student can demonstrate increased ability to gather, analyze, and interpret information and seek solutions to problems. The evaluation of this objective was undertaken through the Zone Summary and Parent Report Form completed by the project staff. The data on student projects are summarized in Table 3. Overall, 90.4% completed the necessary projects to the satisfaction of the staff. Eleven students did not complete the necessary projects satisfactorily. The project succeeded in this objective for 104 out of 115 of its student's slots, but failed with 11 of the students.

2. Objective: Life Skills: Competencies: Each student in the CE+ was required to complete five competencies, i.e., demonstrate that they could perform the survival tasks necessary to modern life, such as use of credit, insurance, budget and health protection. There were 15 competencies, each of which was evaluated by

Table 4

Means, Standard Deviations, and t-tests for Arithmetic Concepts and Arithmetic Applications for Grades 9 and 10

		Pretest		Posttest			
		Mean	SD	Mean	SD	t-value	df
Arithmetic Concepts							
Grade 9	Raw Score	17.96	5.82	21.11	5.75	4.05*	53
	Percentile	51.39	27.14	61.67	26.77	2.89*	53
Grade 10	Raw Score	17.22	4.93	19.22	5.16	3.32*	31
	Percentile	36.38	21.07	43.59	24.92	2.77*	31
Arithmetic Applications							
Grade 9	Raw Score	11.69	4.26	12.96	4.27	2.78*	53
	Percentile	49.15	26.43	52.63	26.50	1.28	53
Grade 10	Raw Score	11.30	4.81	12.10	4.64	1.16	29
	Percentile	38.37	27.83	40.00	26.74	.40	29

*Significant difference at .01 level in favor of posttest, one-tailed test.

an "expert" in that competency. For example, the objective and criterion for Competency I was twofold: (a) the students will explain to the satisfaction of a bank officer the terms and conditions of the bank's credit card, including an exploration of credit limits and interest changes and (b) the student when presented with hypothetical or real data about income and current debts, will complete an installment contract to the satisfaction of a bank loan officer. All of the competencies were similar in format to this one and were evaluated independently by an outside agent. The data for this objective are generated also from the Zone Summary and Parent Report Form and are presented for competencies in Table 3. Overall, 89.6% completed five or more of the competencies to the satisfaction of an outside evaluator. Twelve students did not. The project succeeded in this objective for 103 out of 115 of its students, but failed with 12.

D. PROCESS EVALUATION: CAREER SKILLS

1. Objective: Career Development and Knowledge: The purpose of this objective was to increase the student's knowledge of careers and the world of work. The objective here was redefined and included five subobjectives: (1) the student can relate information about occupations with information about self, (2) the student knows where to locate and how to use information about occupations, (3) the student develops a positive attitude toward career planning, (4) the student has learned the function, characteristics,

and requirements of a broad range of occupations, and (5) the student has increased in knowledge of some of the factors associated with selected occupations that contribute to job success and job satisfaction. These subobjectives were evaluated on a pretest posttest basis and on the Career Knowledge (subobjective 1, 2 and 4 area), Career Attitude (subobjective 3) and Career Planning (subobjective 5) Subtests of the Assessment of Career Development. The pretest and posttest data on these scales and the related t-test comparisons are presented in Table 5 for grades 9 and 10. The results of these analyses indicate that for grade 9 and 10 students the project has attained subobjective 5. It has failed on all other subobjectives for grades 9 and 10.

2. Objective: Self Knowledge: Interests, Abilities, Values: The student can accurately demonstrate more awareness of his or her own current interests, abilities, values and limitations relevant to career goal selection, as determined on a pretest posttest comparison of the Subtest on Career Self-Awareness of the ACD. The data for both grades are in Table 6. The conclusions from this data is that the project did not attain this objective for grade 10, but did attain the objective for grade 9.

3. Objective: Career Explorations: The general tenure of these objectives is that the students will experience many different careers through the CE+ project. The redefined objectives are: (1) the student will meet adults and see how they interact in the course of a normal workday, (2) the student will experience various occupations while refining career skills, (3) the student will

Table 5

Means, Standard Deviations, and t-test Comparisons for Grades 9 and 10 on Career Skills

Test	Grade	Mean	SD	Mean	SD	t	df
1 ACD Knowledge	9	43.75	10.01	43.47	11.84	.26	55
	10	44.82	9.01	44.97	9.29	.13	38
5 ACD Attitude	9	24.43	6.11	22.70	8.94	-1.19	55
	10	25.00	5.77	21.50	5.65	3.86	38
2 ACD Planning	9	52.19	9.24	60.50	10.82	6.43*	55
	10	54.18	10.29	60.10	9.81	3.99*	38

*One tailed test, significantly different at the .01 level in favor of posttest.

Table 6

Means, Standard Deviations, and t-test Values for Grades 9 and 10 on Career Self-Awareness

	Pretest		Posttest			
	Mean	SD	Mean	SD	t-value	df
Grade 9	14.38	3.69	17.23	7.43	6.43*	55
Grade 10	15.21	4.02	15.87	3.81	1.01	37

*One tailed test, significantly different at the .01 level in favor of posttest.

82

explore the community to gain a more realistic sense of self as members of a changing society, and (4) the student will use interviewing and observation techniques to gain information and draw conclusions. These objectives are accomplished through the Career Explorations and Learning Levels and the skills are practiced in the Student Packets. Approximately 92% of the students completed the necessary Explorations and/or Learning Levels. Nine students did not complete them all successfully. For the majority of students, the project attained this objective.

Chapter V

Product Evaluation: Student Outcomes and Parents', Students', and Employers' Perceptions

A. RATIONALE

1. Purpose: The purpose of the product evaluation was to measure and interpret attainments at the end of a project cycle; in this case, at the end of the third year of implementation. The general method of project evaluation included measuring criteria associated with the outcome objectives, comparing results with identified control groups, and making interpretations of the outcomes. Outcome evaluation investigates the extent to which outcome objectives have been attained and reports which objectives were or were not achieved. It also assesses the perceptions of the program by students, parents, and employers.

2. Strategies: One overall strategy was used to assess the attainments at the end of this project cycle using traditional experimental and control groups comparison to measure the effect of participating in the project or not participating.

This strategy involved classical experimental design. Traditionally, experimental design has been the recommended strategy for conducting outcome types of evaluations. A group of subjects is chosen and randomly divided into two subgroups: One is assigned to the experimental treatment, and the other is assigned to a control condition. The two conditions then are imposed, and the subjects measured on common criteria instruments at the end of the project cycles. Analysis of the different performance levels for the two treatments then provides casual statements about their differential effectiveness. If the assumptions required for the approach can be met, the evaluator has a powerful and efficient tool. Such an experimental design was attempted in this project, except that the experimental group were all volunteers for the program. Strictly speaking, no control group of volunteers was available.

The second strategy involves the evaluation of the program by the participants most closely affected, i.e., students, parents, and employers.

3. Design of Outcome Evaluation: The methods of outcome evaluation provide information needed by those who must make decisions regarding the program. The emphasis is clearly on the outcomes produced by the program. This outcome information is related to the outcome objectives of the program, then comparisons are made between expectations and actual results, i.e., between normal growth (control group) and growth through the project (experimental group).

B. STUDENT OUTCOMES

1. Objectives: Following are the final outcome objectives as specified in the proposal:

    1. Students who participate in the program will acquire basic skills which are at least equal to their counterparts in a traditional program.

    2. Students who participate in the program will demonstrate

that they have developed study skills which are superior to those developed by students in a traditional program.

3. Students who participate in the program will show a more positive attitude toward work than a traditional group.

4. Students who participate in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program.

5. Students who participate in the program will demonstrate a higher level of career decision-making skills, job-hunting and job-getting skills than students in a traditional program.

6. Students who participate will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program.

7. Students who participate in the program will have a higher level of satisfaction with themselves, with their choices of education or work than will students in a traditional program.

8. Students who participate in the program will be more likely to select career areas for exploration, for their career goals, or for career preparation which are different than those normally expected for their sex-role than will students in a traditional program.

9. Students who participate in the program will be more likely to select appropriate vocational programs and find more meaning and importance associated with developing voca-

tional skills.

10. Students who participate in the program will have job-entry skills which will permit them a choice of a job, further education or both in a cluster program area of their choosing.

Some consideration has been given to the long range impact of the project. Objectives 7, 8, 9 and 10 are geared more to this level, since the grade 9 and 10 students will not at the time be making choices about their future plans for education, or select career areas or goals, or vocational programs, or will be too concerned with a choice of a permanent choice of an occupation or further education. These objectives tend to be terminal objectives beyond the scope of the third year cycle and for these reasons objectives 7, 8, 9 and 10 were not evaluated.

2. Data Analyses: The primary data analyses undertaken for this aspect of the product evaluation was analysis of covariance which compared the experimental group with the control group on the proper dependent variable with a pretest of that variable used as the covariate. In this manner both groups were statistically controlled and treated as if they were equal on the variables at the outset of the project, controlling for any contaminating effects because of the potential original differences between the groups. Three levels of analyses were undertaken and these analyses were presented in Appendices E, F, and G. Appendix E presents Tables ANOCOV 1 through 16 which for grade 9 compared males and females for experimental and control groups on the posttest of the 16

dependent variables with the pretest of the dependent variable as covariate. Appendix F presents Tables ANOCOV 17 through 32 which for grade 10 undertook the same comparisons on the 16 dependent variables. Appendix G presents Tables ANOCOV 33 through 48 which compares the total groups collapsing across grade levels and using grade level as an independent variable. The tables also present the adjusted means for the dependent variable comparisons.

Objective 1: Students in the program will acquire basic academic skills which are at least equal to their counterparts in a traditional program (control group). The basic skills dependent variables were the Reading Comprehension, Arithmetic Concepts, Arithmetic Applications Subtests of the Comprehensive Tests of Basic Skills. Both raw scores and percentile scores were used in these comparisons. The data for these analyses are presented for grade 9 in ANOCOV 1 through 6, for grade 10 in ANOCOV 17 through 22, and for the full group in ANOCOV 33 through 38. A summary of the analyses follows in Table 7.

On 16 of the comparisons there were no significant differences between the experimental group and the control group. On two comparisons, grade 9 Arithmetic Applications Raw Score on full group Arithmetic Applications Raw Score, the control group scored significantly higher than the experimental group. The project, however, has accomplished this goal because the experimental group is equal to or greater than their counterparts on 16 of the 18 comparisons.

Objective 2: Students in the program will demonstrate that

Table 7

Analysis of Covariance Summary for Basic Skills

Grade 9	Reading Comprehension	Raw Score	No*
		Percentile	No
	Arithmetic Concepts	Raw Score	No
		Percentile	No
	Arithmetic Applications	Raw Score	Yes**
		Percentile	No
Grade 10	Reading Comprehension	Raw Score	No
		Percentile	No
	Arithmetic Concepts	Raw Score	No
		Percentile	No
	Arithmetic Applications	Raw Score	No
		Percentile	No
Full Group	Reading Comprehension	Raw Score	No
		Percentile	No
	Arithmetic Concepts	Raw Score	No
		Percentile	No
	Arithmetic Applications	Raw Score	Yes**
		Percentile	No

*No significant difference at .05 level in favor of experimental group.

**Significant at .05 level in favor of control group.

they have developed study skills which are superior to those developed by students in a traditional program (control group). The study skills dependent variables were the Study Skills: References and Graphic Subtests of the Comprehensive Tests of Basic Skills. Both raw scores and percentile scores were used in these comparisons. The data for these analyses are presented for grade 9 in ANOCOV 7 through 10, for grade 10 in ANOCOV 23 through 26, and for the full group in ANOCOV 39 through 42. A summary follows in Table 8.

In all 12 of the comparisons there were no significant differences between the experimental group and the control group on the Study Skills Subtests in favor of the experimental group. The project has not accomplished this objective, since there are no differences between the two groups in favor of the program.

Objective 3: Students who participate in the program will show a more positive attitude toward work than a traditional group (control group). The dependent variable for this analysis was the Attitude Subtest of the Assessment of Career Development. The data for these analyses are presented for grade 9 in ANOCOV 11, for grade 10 in ANOCOV 27, and for the full group in ANOCOV 43. A summary follows in Table 9.

On all of the comparisons there were no significant differences between the two groups on Career Attitude in favor of the experimental group. The project has not accomplished this objective, since there are no differences between the two groups in

Table 8

Analysis of Covariance Summary for Study Skills

Grade 9	Study Skills: Reference	Raw Score	No*
		Percentile	No
	Study Skills: Graphics	Raw Score	No
		Percentile	No
		Raw Score	No
Grade 10	Study Skills: Reference	Raw Score	No
		Percentile	No
	Study Skills: Graphics	Raw Score	No
		Percentile	No
Full Group	Study Skills: Reference	Raw Score	No
		Percentile	No
	Study Skills: Graphics	Raw Score	No
		Percentile	No

*No significant difference at .05 level in favor of experimental group.

Table 9

Analysis of Covariance Summary For Career Attitude Scales

Grade 9	Attitude	Raw Score	No*
Grade 10	Attitude	Raw Score	No
Full Group	Attitude	Raw Score	No

*No significant difference at .05 level in favor of experimental group.

favor of the program.

Objective 4: Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program. These dependent variables are the Self-Awareness and Knowledge Subtests of the Assessment of Career Development. Raw scores only were available. The data for these analyses are presented for grade 9 in ANOCOV 14 and 15, for grade 10 in ANOCOV 30 and 31, and for the full group in ANOCOV 46 and 47. A summary follows in Table 10.

On all six comparisons there were no significant differences between the experimental group and the control group in favor of the experimental group. The project has not accomplished this goal, because there are no differences between the two groups in favor of the program.

Objective 5: Students in the program will demonstrate a higher level of career decision-making skills, job-hunting and job-getting skills than students in the traditional program (control group). The dependent variables for these analyses were the Career Activity, Career Planning, and Career Exploration Subtests of the Assessment of Career Development. Only raw scores were used in these comparisons. The data for these analyses are presented for grade 9 in ANOCOV 12, 15 and 16, for grade 10 in ANOCOV 28, 31 and 32, and for the full group in ANOCOV 44, 47 and 48. A summary of these analyses is in Table 11.

Of the nine comparisons, seven showed no significant differ-

Table 10

Analysis of Covariance Summary for Self-Awareness and Knowledge

Grade 9	Self-Awareness	No*
	Knowledge	No
Grade 10	Self-Awareness	No
	Knowledge	No
Full Group	Self-Awareness	No
	Knowledge	No

*No significant difference at .05 level in favor of experimental group.

Table 11

Analysis of Covariance Summary for Career Planning, Activity and Exploration

Grade 9	Career Planning	No*
	Career Activity	Yes**
	Career Exploration	No
Grade 10	Career Planning	No
	Career Activity	No
	Career Exploration	No
Full Group	Career Planning	No
	Career Activity	Yes
	Career Exploration	No

*No significant difference at .05 level.

**Significantly different at .05 level in favor of experimental group.

ences. However, 2 (grade 9, Activity and Full Group, Activity) comparisons were in favor of the experimental groups. CE+ students did better than the other students on these comparisons. The project has only minimally accomplished this objective.

Objective 6: Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program (control group). The dependent variable for this analysis is the School Subtest of the Assessment of Career Development. The raw score was used in this comparison. The data for this analysis are presented for grade 9 in ANOCOV 13, for grade 10 in ANOCOV 29, and for the full group in ANOCOV 45. A summary of these three comparisons are presented in Table 12.

On two comparisons, there are no differences. For grade 9, the experimental group scores higher than the control group. The project has only partially accomplished this objective.

C. PRODUCT EVALUATION: STUDENTS', EMPLOYERS', & PARENTS' PERCEPTIONS

1. Introduction: In order to evaluate in a comprehensive manner the CE+ program, the evaluator solicited information from the various constituencies involved in the project. The focus was primarily on the perceptions of the program and some of its dimensions by the students, by the participating employers, and by the parents of CE+ students. Four forms were used. The students completed the Student Survey which assessed various aspects of the project and the Student Evaluation of Learning Site which focused on the evaluation of employer sites at the learning level. The

Table 12

Analysis of Covariance Summary for School

Grade 9	School	Yes**
Grade 10	School	No*
Full Group	School	No

*No significant difference at .05 level.

**Significant difference at .05 level in favor of experimental group.

employers completed the *CE+ Employer Opinion Survey* which attempted to assess the employer's perception of the program. The parents completed the *CE+ Program Parent Opinion Survey* which assessed the parents' opinion of the project. These instruments come from the EBCE Materials. Copies of the forms presented in previous reports.

2. *Students' Perceptions*: The Student Survey was constructed in three parts: (1) the overall assessment of CE+, and (2) the assessment of specific areas of CE+ in open-ended questions, areas such as projects, competencies, explorations.

The survey and the data for the survey are presented in Appendix H and will be summarized here. For most of the items, students were to rate various aspects of the CE+ on a scale of 1 to 5, where 1 was the negative pole and 5 the positive. The dimensions on which the ratings were based varied, but the scale was always to 5. The following statements had a modal value of 5:

> In comparison with regular classes, how much opportunity did CE+ provide you for learning for jobs? Much More
>
> In comparison with regular classes, how much opportunity did you have to interact with other students and teachers? Much More
>
> In CE+ have you felt that you could progress at your own rate? Definitely Yes

The following statements had a modal value of 4, which was positive but less so:

> How would you rate the overall quality of the CE+ pro-

gram?

In comparison with regular classes, how motivated are you to learn CE+?

In comparison with regular classes, how much opportunity did CE+ provide you for learning general knowledge?

The following statement had a "yes-no" alternative, and was chosen "Definitely Yes" by 77.2% of the students:

If you had it to do over again, do you think you would decide to participate in CE+?

The students responded to items concerning the strengths and weeknesses of the CE+ program. The following weaknesses were chosen by more than 20% of the students.

Some students can't handle the freedom.	48.1%
Lack of a variety of job sites to meet student interest.	35.4%

The following strengths were chosen by more than 30% of the students:

Students learn about real-life situations.	51.9%
Students learn a variety of things.	43.0%
Students learn about a variety of jobs.	36.7%
Good way to learn.	31.6%

In the second part of the survey the students were asked open-ended questions about the projects, the explorations, the learning levels, basic skills meetings, the zone structure, the competencies and the CE+ resources. The general overall evaluations of students as to positive versus negative statements are

Table 13

Percent of Positive or Negative Response to Areas of CE+

	Positive	Negative	Ambivalent No Response
Projects	72%	21%	7%
Explorations	98%	2%	0%
Basic Skills	44%	38%	18%
Zones	61%	22%	17%
Competencies	54%	38%	8%
Resources	27%	31%	42%

presented in Table 13.

Overall, the statements were very positive in regard to explorations. There was not enough information on learning levels. where the students expressed a desire for more experience in the world of work. Most students really enjoyed the projects and found them very practical and meaningful. The zones were considered somewhat positively, and were regarded as necessary and relevant check points. Some students were very positive about their basic skills experience; however, 38% felt that they had learned little if nothing. They found most basic skills tasks too elementary and easy. The competencies caused many problems and negative feelings as some students found them too long and not relevant. Resources were generally rated average; students generally indicated that they did not use them.

3. Employers' Perceptions: The CE+ Employer Opinion Survey was completed by 56 employers. The purpose of the survey was to assess their perspective of the project and request suggestions for improvement. The survey and the data are presented in Appendix I.

Responses are summarized in Table 14.

Two items of the questionnaire refer to the relationship between the employer and the CE+ staff. Over 90% of the employers indicated that they had received enough information and adequate communication from the CE+ program. The general comment from employers indicated that some would like more feedback from the students or staff as to how effective they were and how possibly they could change to become more effective. Two other items refer to

Table 14

Summary of Employer Survey

	Yes
1. Did the program staff provide you with enough information to help you direct student activities at your site?	93%
2. Do you feel students are able to learn things at job sites that they could not learn as well in a regular classroom?	98%
3. Do you think the students you have worked with are really interested in learning new things?	73%
4. Would you recommend to a potential employer or resource person that he/she also become involved with the program?	95%
5. How have employees at your site reacted to your businesses participation in CE+? (Yes, positive)	91%
6. Did you receive adequate communications from the CE+ program?	93%

the relationship between the students and employers. Over 95% of the employers felt the students were learning information that they would not learn in a regular classroom. For the other item, 73% of the employers felt that the students were interested in learning new things. Employers who were negative to this item indicated that for the most part they felt students were interested but some were not. The general comment was that some students were very passive, lacked initiative and were not really interested in being at the job site. The last two items refer to the employee's reactions. Ninety-five percent of employers would recommend to other employers that they become involved in the program. The overall employer reaction to CE+ students was positive.

The general overall reaction of employers to CE+ was positive. Almost all indicated they would continue with the program. They felt they were providing a community service and they liked working with most of the young people.

4. Parents' Perceptions: The perceptions of the parents of students in the program were assessed with the CE+ Program Parent Opinion Survey. The perceptions of the parents are deemed as being extremely important to the future operations of the project. The survey and the data from the survey are presented in Appendix J. The items of relevance will be repeated in the context. There were 36 parent surveys returned and summarized.

Ninety-three percent of the parents felt that their child's experience with CE+ compared better or much better with the past school experience of their child and 92% indicated that they would want their child to participate in the program, if they had to do it over again. Eighty-two percent indicated that their child liked the CE+ program better or much better than past school experiences and 72% felt that they had received enough information about their child's progress in the CE+ program. However, parents had few personal contacts with the staff and most had attended only one meeting with other CE+ students' parents. Over 96% indicated the project helped their child learn about occupations and helped form career plans. Parents (83%) felt their child was more motivated to learn in the CE+ atmosphere and that their child talked very often about the happenings in the CE+ program.

Parents (44%) indicated that the major weakness of the program was that students could not handle the freedom. The parents rated all the suggested strengths of the program quite highly (see Appendix J). The parents were asked if they noticed any positive changes in their child that they felt were a result of participation in the CE+ program. Their responses are summarized in Table 15.

The items over 40% were better understanding of jobs (86%), more realistic attitudes (75%), greater self-confidence (67%), clearer direction about future (50%), better able to relate to others (44%) and greater maturity or self direction (42%). As for negative changes, there were none chosen by more than two parents. The prime contributions of the CE+ program from the parent's perspective was that the students receive first-hand knowledge of the "real world," received on-the-job skills and worked with other people. The overall reaction of parents was very positive toward all aspects of the CE+ program.

Table 15

Positive Changes as Perceived by Parents

Greater maturity or self direction	42%
Better able to relate to others	44%
Greater self-confidence	67%
Clearer direction about his/her future	50%
More interested in education	31%
Better understanding of jobs	86%
Improvement in basic skills	25%
More realistic attitudes toward life, work, etc.	75%

Chapter VI

Summary

A. SUMMARY

This section summarizes the results of the Third Party Evaluation of the Third Year. The divisions will follow the sections already explicated in the main section of the evaluation. The focus will be on the attainment of objectives in the Process and Product phases.

B. IMPLEMENTATION EVALUATION SURVEY

The overall conclusion of the implementation evaluation for the third year was that the project was functioning efficiently and effectively and was following the intent of the original CE+ proposal.

C. PROCESS EVALUATION SUMMARY

The process evaluation consisted of three parts: Basic Skills, Life Skills, and Career Skills:

1. Objectives: Basic Skills
    a. Improvement in Reading Skills - partial (25%)
    b. Improvement in Oral Communication Skills - attained
    c. Improvement in Writing Skills - partial (90%)
    d. Improvement in Basic Quantitative Skills - partial (63%)
2. Objectives: Life Skills
    a. Satisfactory Completion of Projects - partial (90%)
    b. Satisfactory Completion of Competencies - partial (90%)
3. Objectives: Career Skills
    a. Development of Career Knowledge - partial (33%)

b. Development of Self-Knowledge - partial (50%)

c. Career Explorations - partial (92%)

D. PRODUCT EVALUATION SUMMARY

The project evaluation focused on the terminal objectives and the perceptions of parents, students and employers.

1. Objectives

a. Students in the program will acquire basic academic skills at least equal to their counterparts in a traditional program - partial (88%).

b. Students in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program - not attained.

c. Students in the program will show more positive attitude toward work than a traditional program - not attained.

d. Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program - not attained.

e. Students in the program will demonstrate a higher level of career decision-making skills, job-hunting, and job-geting skills than students in a traditional program - partial (28%).

f. Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program - partial (50%).

Chapter VII

Overall Evaluation for Three Years

A. SUMMARY

This section summarizes the results of the Third Part Evaluation for the three years of the project cycle. The divisions will follow the sections already explicated in the early Interim Evaluations. The focus will be on the attainment of objectives in the Process and Product phases over the three years. There also will be summarized the evaluation of the project by students who were in the program for the first two years.

B. IMPLEMENTATION EVALUATION SUMMARY

The overall conclusion of the implementation evaluation for the three years of the project cycle was that the CE+ project has followed the original intent and design of the CE+ proposal with its revisions.

C. PROCESS EVALUATION SUMMARY

The process evaluation consisted of three parts: Basic Skills, Life Skills, and Career Skills:

	First Year	Second Year	Third Year
1. Objectives: Basic Skills			
a. Improvement in Reading Skills	not attained	partial (25%)	partial (25%)
b. Improvement in Oral Communication Skills	attained	attained	attained
c. Improvement in Writing Skills	attained	attained	partial (90%)
d. Improvement in Basic Quantitative Skills	partial (50%)	partial (50%)	partial (63%)
2. Objectives: Life Skills			
a. Satisfactory Completion of Projects	partial (90%)	partial (85%)	partial (90%)
b. Satisfactory Completion of Competencies	partial (83%)	partial (77%)	partial (44%)
3. Objectives: Career Skills			
a. Development of Career Knowledge	partial (40%)	not attained	partial (33%)
b. Development of Self-Knowledge	not attained	not attained	partial (50%)
c. Career Explorations	attained	attained	partial (92%)

D. PRODUCT EVALUATION SUMMARY

The product evaluation focused primarily on the six terminal objectives that were assessed yearly:

1. Objectives	First Year	Second Year	Third Year
a. Students in the program will acquire basic academic skills at least equal to their counterparts in a traditional program.	attained	attained	partial (88%)
b. Students in the program will demonstrate that they have developed study skills which are superior to those developed by students in a traditional program.	not attained	partial (33%)	not attained
c. Students in the program will show more positive attitude toward work than a traditional program.	not attained	not attained	not attained
d. Students in the program will demonstrate a higher level of self-awareness and career awareness than will students in a traditional program.	not attained	not attained	not attained
e. Students in the program will demonstrate a higher level of career decision making skills, job-hunting, and job-getting skills than students in a traditional program.	partial (33%)	partial (56%)	partial (28%)
f. Students in the program will have greater awareness of their opportunities for continuing and recurrent education than will students in a traditional program.	partial (67%)	not attained	partial (50%)

E. FOLLOW-UP EVALUATION

In order to assess the impact of CE+ on students, a follow-up questionnaire was sent to students who had participated in the first two years of the CE+ program. This section summarizes the responses of the 28 students who responded to the questionnaire (Appendix K).

The first two items dealt with the impact of CE+ on some of the actions of students. The data are summarized in Table 16. On both items, CE+ appeared to have an impact. It had influenced 75% at least somewhat in their selection of high school choices and had influenced 92% at least somewhat in their career choices or career goals.

The next question dealt with 14 areas in which CE+ may have been helpful to students. The data are summarized in Table 17. The areas in which the students felt that the CE+ program had had the most impact were:

8. Understanding jobs and job attitudes
7. Experience in working with adults
13. Making application for employment

All are related directly to the career objectives of the program. The areas with the least impact were:

2. Abilities in the basic skills
14. Obtaining full or part time employment

It is interesting to note the basic skills is the lowest rated area and the area in which the project has potentially the least impact.

Table 16

Follow-up Questionnaire

1. Has the fact that you participated in CE+ had any effect on the high school courses you selected for next year?

Definitely	11%
Somewhat	64%
Not at all	25%

2. Has your participation in CE+ helped to firm up any of your career choices or career goals following your education?

Definitely	37%
Somewhat	55%
Not at all	8%

Table 17

Areas of Influences

1.	Organizing time, effectors, etc.	54%
2.	Abilities in the basic skills.	21%
3.	Maturity and self-direction.	39%
4.	Relating better to other people.	57%
5.	Locating resources for information.	43%
6.	Self-confidence.	50%
7.	Experience in working with adults.	71%
8.	Understanding jobs and job attitudes.	75%
9.	Realistic attitudes toward work, life, values.	32%
10.	Decision making skills.	39%
11.	Taking responsibility for own actions.	50%
12.	Preparations to accept adult responsibilities and privileges.	36%
13.	Making application for employment.	61%
14.	Obtaining full or part time employment.	25%

The next five items dealt with their assessment of CE+ as a program. The data are summarized in Table 18. The responses to the items indicate that students perceived their experiences in CE+ very positively and believed quite strongly that CE+ provided them with unique and rewarding experiences.

The overall comments of the students were all positive and indicated support for continuation and/or expansion of the program.

Table 18

Assessment of CE+

4. In your estimation at this time how would you rate the overall quality of CE+?

Excellent	5	28%
	4	50%
	3	7%
	2	11%
Poor	1	4%

5. If you had to do it over again, do you think you would decide to be in CE+?

Yes	75%
No	25%

6. In comparison with regular classes, how much opportunity did CE+ provide you for learning about jobs?

Much More	5	56%
	4	29%
About the same	3	11%
	2	0%
Much Less	1	4%

7. In comparison with regular classes, how much opportunity did CE+ provide you for learning general knowledge?

Much More	5	25%
	4	36%
About the same	3	18%
	2	14%
Much Less	1	7%

8. In comparison with regular classes, how much opportunity did you have to interact with other students and teachers?

Much More	5	42%
	4	29%
Much the same	3	14%
	2	11%
Much Less	1	4%

G. STAFF EMPLOYMENT AND UTILIZATION:

Staff employment and utilization has undergone only minor change in the Career Education Plus program. The learning aide's position has been revised from primarily clerical duties to counseling and tutoring students in the basic skills area of communication and mathematics. In order to allow time for complete student involvement in basic skills, the learning aide's hours have been increased to include the complete school day. The secretary's duties were expanded to include driving students to specified job sites and record keeping procedures needed for timely placement of the students at the explorations and projects.

The CE+ Advisory Board was an extremely viable part of the total program. Appendix L has a list of each advisory board member and the cluster they represent.

H. STAFF DEVELOPMENT:

Three basic areas of staff development evolved during the 1976-1977 school year:

1. Project Staff In-Service
    a. Project Director, Jerry Tuchscherer, met with the staff to discuss the implementation of CE+ program and other related topics.
    b. Lyle Sorum, from the Fargo Public School system, met with the staff and discussed the Career Education program in the Fargo system.
    c. The Northwest Regional Educational Laboratory prepared and conducted an in-service workshop for the Career Education

tion staff.

d. The CE+ staff traveled to Devils Lake to meet with the people involved in the Devils Lake Career Education program.

e. Two project staff members attended the Commissioner's National Conference on Career Education.

f. The local CE+ coordinator attended the I.I.I.P. (Increasing the Impact of Innovative Projects) conference in Fort Worth, Texas.

g. The project Resource Specialist attended a conference on non-traditional careers for women in Grand Forks, North Dakota.

h. The CE+ staff attended the N.W.R.E.L. Conference on E.B.C.E. sites in Denver.

i. The local coordinator attended a three day Facilitators Training Workshop held at Grand Forks, North Dakota, entitled Life Career Development System.

2. Faculty and Administration In-Service

a. The CE+ staff held orientation sessions, dealing with all aspects of the CE+ program, for Central Campus faculty members and administrators.

b. An in-service was held for the Minot Public School District Central Office administrators. The session focused on the concept of Career Education and more specifically CE+.

c. Individual meetings, with several Vocational Coordinators, were held during the year to explain the goals and objectives of the Career Education Plus program.

d. The CE+ staff attended a School Board meeting to make a brief presentation of the various phases of the CE+ program.

3. Employer Instructor In-Service

a. Two sessions were held with community resource people at the CE+ learning center. The first meeting was to further introduce the program to them and the second session was held to receive feedback from the community and answer questions concerning the project. Individual meetings with all the participating employers and their representatives were held throughout the year to maintain progress report on student learning experiences.

b. Early in the year an orientation presentation was held to inform the educational committee of the local Chamber of Commerce about the new career education program in Minot. They endorsed the program and have been regularly appraised of the progress of the program.

Three basic areas of staff development evolved during the 1977-1978 school year.

1. Project Staff In-Service

a. The Local Coordinator was invited to join the local chapter of the American Society for Personnel Administrators. Meetings are held monthly to improve the quality of personnel functions in the community of Minot. This membership enhances the Local Coordinator's duties in working closely with area personnel directors.

b. The Local Coordinator was invited to serve on a special task force of the Governors Council on Youth and Children. He will serve on the 1978 Statehouse Conference for Youth.

c. The CE+ student coordinator attended a three-day institute in decision-making sponsored by the College Entrance Examination Board. The conference was held November 4, 5, and 6 at Georgia State University in Atlanta.

d. The Project Resource Specialist attended the Sixth Annual National Association for Industry-Education Cooperation Convention in Springfield, Massachusetts. A few of the conference sessions were: Consumer Education; Job Placement: Community Resource Workshop; New Decisions with work in America; and Experience Based Career Education.

2. Faculty and Administration In-Service

a. An in-service orientation session was held for all Minot Public School District guidance counselors on September 20, 1977. This meeting included elementary as well as secondary counselors.

b. The CE+ Student Coordinator conducted a workshop on decision-making for the Minot Public School District Central Office administrators. This workshop has also been presented to several student and adult groups in Minot.

c. A special report was made by the Local Coordinator to the Minot Public School Board members on CE+. The project's slide/tape presentation was shown and a short oral report was given in regard to the progress and plans for the next year.

3. Employer Instructor In-Service

a. An employer-instructor meeting was held to brief new job site employer-instructors on the mechanics of CE+. Several experienced employer-instructors were also present at the meeting.

b. Employers were given guides to assist them in working with students at their job sites. The name of the booklet is The Community Resource Person's Guide for Experienced-Based Learning. The booklet is produced by the Northwest Regional Educational Laboratory in Portland, Oregon. The responses received from employer representatives concerning this booklet have been excellent.

c. The CE+ project staff held an employer-instructor development session for participating employers and/or their representatives. The primary objectives of this meeting were to receive feedback from the community and answer questions concerning project activities.

The Staff Development of 1978-79 are found on pages 25 through 28 of the third year report.

APPENDICES

APPENDIX A

Job Sites

123

JOB SITES

	Names	Businesses
1.	Vince Cartwright	Aero Flight Inc.
2.	Bill Schollmeyer	Aim Realty
3.	Gene Homer	Air Flight Service
4.	Bill Beadnell - Bob McDonald	Air Traffic Control
5.	Jim Blain	Airway Facilities
6.	Gary Nutz	American Bank & Trust
7.	Ray Berry	Army
8.	Arnie Havelka	Air Force
9.	Pete Hugret	Artistry & Hair Fashions
10.	Leo Broyles	Asplund Garage
11.	Bill Klimpel	B-K Radio
12.	Keith Bloms	Blom's Meat Market & Locker Plant
13.	Chuck Duke	Blood Services
14.	Doug Schouweiler - Wally Holter	Bridgeman's
15.	Clyde Nelson	Broadway Body Shop
16.	Don Hummel	Burger King
17.	John L. Reinke	Burlington Northern Railroad
18.	Jeff Miller	Coca Cola
19.	Gordon Emerson	Dakco Distributors
20.	Al Svare - Cliff Rostvedt	Dokota Drug Co.
21.	Bob Walstad	Dean - Witter - Reynolds
22.	Dr. G.E. Seiffert	Dentist
23.	Marlas Gibson	Edison Elem. School

Cont.

24.	Robert Heinze	Erickson Auto Rebuild
25.	Robert Knutt	Farmers Union Elevator
26.	Capt. Jerry Mohoney	Fire Department
27.	Ed Everets	First Bank of North Dakota
28.	Penney Hamilton	First District Health Unit
29.	Wayne Brostrom	First National Bank
30.	Joe Vicha	G.T.A. Feed Plant
31.	Dick Bartsch	Hart Motor Express
32.	Paul Boespflug	Interstate Transportation
33.	Lois Gabel	J.C. Penney Co.
34.	Jerry Pullen	Jerry's Standard
35.	Dr. Gene Jordahl	Jordahl Animal Hospital
36.	Rod Romine	KCJB Radio & KXMC TV
37.	Jerry Gutensohn	KKOA
38.	Henry Howe	Legal Assistance (Attorney at Law)
39.	Philip Lowe	Lowe's Garden
40.	Al Larson	Lowe & Larson Printing
41.	J.P. Hathelid - Dan Hager	Midco Data Systems
42.	Bill Gumeringer	Midwest Federal S & L
43.	Lynda Laux - Bachand	Minot Daily News
44.	Dudley Zimmerman	Minot Ear, Eye, Nose & Throat
45.	Mike Nilson	Minot Park District
46.	Mr. Jerry Kaup	Minot Public Library
47.	Dr. Foss - Dr. Pinkerton	Minot Veterinary Clinic North
48.	Lloyd Sawyer	North Dakota Job Service

Cont.

49.	Dale Bakken	Northwest Music Center
50.	Gene Neal	Northwest Pharmacy
51.	Frank Ellingson	Northwest Sporting Goods
52.	Vivian Johnson	Parker Hotel
53.	Erwin Chole	P & C Electric
54.	Linda Prate	Perkett Elem.
55.	Boyde Galgerud	Police Department
56.	Gary Porter	Porter Brothers
57.	Ms. Johnson	Principal
58.	Bill Leonard	Rainbow Photo Lab.
59.	Terry Auch	Eric Ramstad Jr. High
60.	Keith White	Recreation Commission
61.	Reub Forsberg	Reub's Camera
62.	Ron Hanson	Ron's Shoe Repair
63.	Jerry Schriock	Schriock's Lawn & Trail
64.	Patsy Haugeherg	Senor Pizza
65.	Tony Kulig	Shirt Shed
66.	Leroy Slorby	Slorby Studio
67.	Mark Hamre	Soundco Music
68.	Mrs. Juhala	Spinning Wheel
69.	Terry Kongelf	Stero Shop
70.	Pat Sullivan	Sullivan's Floral & Gift
71.	Jim Mehring	Sweetheart Bakery
72.	Mr. Goodman	Teacher - Central Campus
73.	Mrs. Meuth	Teacher - Central Campus
74.	John Thomas	Thomas Funeral Home

Cont.

75. Bob Opperude	Today's Male
76. Nita Korgel	Trinity - Lab. Tech.
77. Terry Hoff	Trinity Medical - Accountant
78. Val Schell	Val's Cyclery
79. Bryan Valker	Valker's Floral
80. Dennis Helmers	Vocational Rehabilitation
81. Al Mikkelson	Voc. Ed. Small Engines Auto Tech.
82. Dennis Egge	Ward County Agent
83. Mrs. Knight	Washington Elem. School
84. Bob Schultz	Western Auto Supply
85. Lyle Frost	Westlie Motors
86. Vance Lozensky	Wood Mechanics
87. Lorna Van de Streek	Y. M. C. A.

Names	School Board
88. Mr. Wallace Berning	President
89. Dr. Richard Crisera	Vice President
90. Mrs. Zoanne Flickinger	Member
91. Mr. Franklin Huwe	Member
92. Mr. Gary Holum	Member
93. Dr. Edward Mundy	Superintendent of Schools
94. Dr. Lowell Latimer	Assistant Superintendent

Names	CE+ Advisory Board
95. Jim Crawford	Advisory Board Member
96. Pat Des Roches	Advisory Board Member

Cont.

97.	Nancy Broyles	Advisory Board Member
98.	Ethel Crisera	Advisory Board Member
99.	Mavis Williamson	Advisory Board Member
100.	Del Bjork	Advisory Board Member

	Names	State Board for Voc. Ed.
101.	Jerry Tuchscherer	Supervisor for Voc. Guidance
102.	Carrol Burchinal	Director
103.	Norbert Mayer	Assistant Director
104.	Reuben Guenthner	Assistant Director

	Names	Compentencies
105.	Mel Freuh	1st National Bank
106.	Carol Sladek	1st National Bank
107.	Jay Monicken	Insurance
108.	Dave Ordiway	Prudential Insurance
109.	Kay Ralston	I.R.S.
110.	Debbie Hemphill	Central Campus
111.	Corinne Schlak	

	Names	Compentencies
112.	Gladys Pederson	County Courthouse
113.	Bob Putre	Red Cross
114.	Nevin Van de Streek	Midwest Federal Bldg.
115.	Tom Slorby	States Attorney

	Names	Job Sites
116.	Ed Lands	Lands Ambulance

Cont.

117.	Laverne Link	Chief of Volunteer Police

	Names	Principals
118.	Larry Wahlund	Erik Ramstad Jr. High
119.	Ernest Medalen	Edison Elem.
120.	Douglas Hultberg	Perkett Elem.
121.	Harlow Magnusson	Washington Elem.
122.	John Youngbeck	Longfellow Elem.
123.	Richard Olthoff	Magic City Campus
124.	John Landsiedel	Magic City Campus
125.	Lynn Sanford	Magic City Campus

	Names	Job Sites
126.	Thomas Fisher	Thompson - Larson Funeral Home
127.	Devra Barros	Police Department

APPENDIX B

Advisory Board Agenda and Minutes

CE+

CAREER EDUCATION PLUS
Planning
Learning
Understanding
Success

MINOT PUBLIC SCHOOL DISTRICT NO. 1
CENTRAL CAMPUS HIGH SCHOOL
MINOT, NORTH DAKOTA 58701
TELEPHONE 701/852-3194, Ext. 29

AGENDA
CAREER EDUCATION PLUS
Advisory board meeting
April 12, 1979

1. Call meeting to order.

2. Presentations -

A. Optomist	C. Williston
B. Rotary	D. State Board for Voc. Ed.

3. Summer School.

4. 1979-80 Funding.

5. Next year's classes.

6. New Business.

7. Adjourn.

Career Education Plus
Advisory Board Meeting
April 12, 1979

In Attendance: Wayne Brostrom, Lorna Van de Streek, O.H. Mittelberg, Dennis Egge, Penny Hamilton Ethel Crisera (In her jogging suit!) and Bruce Walker

Bruce talked about the very positive responses he had received from the Optomist club and Rotary club. He also mention the presentation that had been made to the State Board for Vocational Education.

A in-service workshop was put on by the CE+ staff for the Jr. and Sr. high teachers in Williston. There was lots of interest in adapting parts of the CE+ program to a traditional cloassroom setting.

Summer school registration will be the 1st week in May. CE+ will be offered again this summer.

The CE+ program has been working with the State Board for Voc. Ed. in securing additional funds for next year in order to maintain the level of the existing program.

There has been an excellant response from students for CE+. For the 1979-80 school year there are 196 students enrolled.

An appreciation banquet for all employer instructors and community people who have helped the CE+ program will be held May 16, 1979, at the Minot Elks Lodge.

A workshop for instructors from around the state will be held the last week in May. Minot State College and NDSU are issuing credit for the class.

A tentative date for the next Advisory Board Meeting will be May 10, at noon in the Board of Education Building.

APPENDIX C

Speakers List of Career Awareness Day

133

CAREER AWARENESS DAY

May 1, 1979
Central Campus

Speakers List

Agriculture

Dennis Egge - Ward County Agent - All Day
Court House

Aviation

Federal Aviation Personnel - F.A.A. Minot Airport
Jim Blaine - All Day
Jerry Semler - All Day

Communication

KIZZ Radio -
- Bob Bitz 8:45 - 9:45
- Terry Fleck 10:45 - 11:45
- Bob Rutzker 1:15 - 2:15

Minot Daily News -
- Sandy Paraskra
- Bob Petry
- Betty Gordon
- Kathy Tofflemire
- Mary Muhlbradt
- Mike Kramer

Computers

Craig Nanson - Minot Public Schools - All Day
Jim Hatlelid - Midco Data Systems - All Day

Energy

Jack Wiley - Central Power - All Day

Law - Check Law Firms

Colin Dobrovolny 8:45 - 9:45
Kip Flagstad 10:45 - 11:45
Judy Howard 1:15
Bob Lamont 2:15

Music

Jack Cameron - All Day - Minot Public Schools

Medicine

Marilyn Bader - All Day
Ruth Coleman - Trinity School of Nursing - All Day

APPENDIX D

Experience-Based Career Education Workshop Brochure

Career Education Plus

Planning

Learning

Understanding

Succeeding

"Education Is Going To Work"

Career Education Plus
Central Campus High School
Minot, North Dakota 58701

Minot State College
Division of Continuing Educatio

in cooperation with

The State Board
for Vocational Education

and

Minot Public School District

invites you to an

Experience-Based Career Education Workshop

May 29 through June 1, 197

CE+

- Experiential learning
- Community involvement
- Individualizatio
- Job site visitation
- Self awareness
- Survival skills

Please Post

Experience-Based Career Education Work

May 29 through June 1, 1979

Central Campus High School • Minot, North Dakota

Experienced-Based Career Education

This course will present some ways of expanding the learning process at the secondary level. It will deal with some specific activities that can be used by the classroom teacher as related to experiential learning. The class will also show the role of the teacher with the student in selecting and using these experienced-based activities.

May 29, 1-5
Introduction
What is EBCE?
How and Why EBCE works?
Teacher's role.

May 30, 8-12
Planning with students
Writing objectives
Life Skills —
Projects — writing a project

May 30, 1-5
Competencies
Visit a certifier
Go through process

May 31, 8-12
Career Development
Job Sites Arrangement of Sites
Basic Skills

May 31, 1-5
Explorations
Visit Sites

June 1, 8-12
Adapting EBCE to your school
Student evaluation
Follow-up
Wrap-up

When

- Tuesday, May 29, at 1:00 p.m. through Friday, June 1st at 12:00 noon.

Where

- Workshop will be held in room 406 of Central Campus, Minot High School.

Credit

- Participants may register for graduate credit or undergraduate credit.
- Graduate credits through N.D.S.U. — $20.00 per quarter hour. Undergraduate credits through Minot State College $17.00 per quarter hour.

Meals/Housing

- Participants will be responsible for their own room and board.
- A block of rooms have been set aside at the Econ-o-tel — Single $13.50, Double $20.00 (two beds). Room will be held until the 15th of May.

Workshop Size Limit

- Enrollment will be limited to the 1st 30 persons who send in a deposit of $25.00 made out to Minot Public Schools.
- Deposit of applicants who are accepted, but do not attend will be forfeited.
- Applications received after class limit is reached will have their deposit refunded.

Stipends

- A stipend of $100.00 will be available to each participant to defray cost of travel, meals and lodging upon completion of the program.

Detach and Return with Deposit

E.B.C.E. Workshop

Name ____________ Telephone ____________

Position Area ____________

Address ____________

____

Please enclose a $25.00 deposit.

Return to: Career Education Plus
Central Campus High School
Minot, North Dakota 58701

xperience-Based Career Education

May 29 - June 1, 1979

CE+

APPENDIX E

ANOCOV 1 through 16

140

APPENDIX E

ANOCOV 1 through 16

ANACOV 1

Analysis of Covariance for the Ninth Grade on Post Test Reading Raw Score with Pretest Reading Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	28.35	1	28.35	.95
Sex	13.14	1	13.14	.44
Interaction	.21	1	.21	.01
Control: Pretest Covariate	3626.94	1		
Error Residual	2587.17	87	29.74	
Total	6246.49	91		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	52	28.16
Control	40	27.01
Sex		
Male	40	27.22
Female	52	2[illegible]00

ANACOV 2

Analysis of Covariance for the Ninth Grade on Post Test REading Percentile with Pretest Reading Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	324.02	1	324.02	1.02
Sex	66.32	1	66.32	.21
Interaction	9.78	1	9.78	.03
Control: Pretest				
Covariate	35875.06	1		
Error				
Residual	27548.10	87	316.65	
Total	63830.58	91		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	52	49.45
Control	40	45.57
Sex		
Male	40	46.77
Female	52	48.52

ANACOV 3

Analysis of Covariance for the Ninth Grade on Post Test Arithmetic Concepts Raw Score with Pretest Arithmetic Concepts Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	9.15	1	9.15	.48
Sex	1.24	1	1.24	.07
Interaction	49.43	1	49.43	2.60
Control: Pretest				
Covariate	892.61	1		
Error				
Residual	1635.99	86	19.02	
Total	2588.72	90		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	21.68
Control	37	22.34
Sex		
Male	39	21.81
Female	52	22.05

ANACOV 4

Analysis of Covariance for the Ninth Grade on Post Test Arithmetic Concepts Percentile with Pretest Arithmetic Concepts Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	36.54	1	36.54	.09
Sex	42.23	1	42.23	.10
Interaction	1444.62	1	1444.62	3.56
Control: Pretest Covariate	20905.95	1		
Error Residual	34899.37	86	405.81	
Total	57324.72	90		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	65.44
Control	37	64.09
Sex		
Male	39	64.09
Female	52	65.49

ANACOV 5

Analysis of Covariance for the Ninth Grade on Post Test Arithmetic Applications Raw Score with Pretest Arithmetic Applications Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	40.00	1	40.00	4.76*
Sex	19.66	1	19.67	2.34
Interaction	41.23	1	41.23	4.91*
Control: Pretest Covariate	833.74	1		
Error				
Residual	739.42	88	8.40	
Total	1673.11	92		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	12.98
Control	39	14.31
Sex		
Male	39	14.09
Female	54	13.15

*significant at .05 level

ANACOV 6

Analysis of Covariance for the Ninth Grade on Post Test Arithmetic Applications Percentile with Pretest Arithmetic Applications Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	1183.27	1	1183.27	3.75
Sex	1103.07	1	1103.07	3.50
Interaction	1623.17	1	1623.07	5.15*
Control: Pretest Covariate	32796.83	1		
Error				
Residual	27736.37	88	315.19	
Total	64400.84	92		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	52.98
Control	39	60.21
Sex		
Male	39	60.09
Female	54	53.06

*significant at .05 level

ANACOV 7

Analysis of Covariance for the Ninth Grade on Post Test Study Skills: References Raw Score with Pretest Study Skills: References Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	17.11	1	17.11	.43
Sex	.22	1	.22	.01
Interaction	31.88	1	31.88	.80
Control: Pretest				
Covariate	48.31	1		
Error				
Residual	3591.98	90	39.91	
Total	3698.74	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	53	13.09
Control	42	12.23
Sex		
Male	41	12.77
Female	54	12.67

ANACOV 8

Analysis of Covariance for the Ninth Grade on Post Test Study Skills: References Percentile with Pretest Study Skills: References Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	61.44	1	61.44	.10
Sex	859.49	1	859.49	1.38
Interaction	34.43	1	34.43	.06
Control: Pretest				
Covariate	26454.43	1		
Error				
Residual	55995.31	90	622.17	
Total	83387.50	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	53	57.10
Control	42	55.47
Sex		
Male	41	52.89
Female	54	59.03

ANACOV 9

Analysis of Covariance for the Ninth Grade on Post Test Study Skills: Graphics Raw Score with Pretest Study Skills: Graphics Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	35.56	1	35.56	.37
Sex	46.02	1	46.02	.48
Interaction	8.54	1	8.54	.09
Control: Pretest Covariate	517.31	1		
Error Residual	8570.31	90	95.23	
Total	9173.41	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	53	19.10
Control	42	20.34
Sex		
Male	41	20.46
Female	54	19.03

ANOCOV 10

Analysis of Covariance for the Ninth Grade on Post Test Study Skills: Graphics Percentiles with Pretest Study Skills: Graphics Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	1931.93	1	1931.93	3.47
Sex	508.60	1	508.60	.91
Interaction	4272.40	1	4272.40	7.68**
Control: Pretest Covariate	28283.82	1		
Error Residual	50056.49	90	556.18	
Total	85181.88	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	53	53.02
Control	42	62.14
Sex		
Male	41	54.35
Female	54	59.10

**significant at .01 level

ANOCOV 11

Analysis of Covariance for the Ninth Grade on Post Test Career Attitude with Pretest Career Attitude as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	168.11	1	168.11	2.89
Sex	17.60	1	17.60	.30
Interaction	21.45	1	21.45	.37
Control: Pretest Covariate	5581.12	1		
Error				
Residual	5356.57	92	58.22	
Total	11149.86	96		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	57	43.03
Control	40	45.72
Sex		
Male	43	43.66
Female	54	44.53

ANOCOV 12

Analysis of Covariance for the Ninth Grade on Post Test Career Activities with Pretest Career Activity as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	1326.98	1	1326.89	17.96***
Sex	8.18	1	8.18	.11
Interaction	110.82	1	110.82	1.50
Control: Pretest				
Covariate	3178.64	1		
Error				
Residual	6798.15	92	73.89	
Total	11419.99	96		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	56	60.63
Control	41	53.14
Sex		
Male	43	57.12
Female	54	57.73

***significant at .05 level

ANOCOV 13

Analysis of Covariance for the Ninth Grade on Post Test School with Pretest School as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	212.65	1	212.65	5.87*
Sex	76.72	1	76.72	2.12
Interaction	62.39	1	62.39	1.72
Control: Pretest				
Covariate	108.44	1		
Error				
Residual	3189.53	88	36.25	
Total	3652.51	92		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	52	17.16
Control	41	14.10
Sex		
Male	41	16.84
Female	52	15.00

*significant at .05 level

ANOCOV 14

Analysis of Covariance for the Ninth Grade on Post Test Self-Awareness with Pretest Self-Awareness as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	4.69	1	4.69	.36
Sex	18.92	1	18.92	1.46
Interaction	.38	1	.38	.03
Control: Pretest				
Covariate	69.51	1		
Error				
Residual	1138.76	88	12.94	
Total	1232.31	92		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	52	13.52
Control	41	13.07
Sex		
Male	41	13.83
Female	52	12.92

ANOCOV 15

Analysis of Covariance for the Ninth Grade on Post Test Career Planning Knowledge with Pretest Career Planning Knowledge as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	146.75	1	146.75	2.49
Sex	31.43	1	31.43	.53
Interaction	17.17	1	17.17	.29
Control: Pretest				
Covariate	206.44	1		
Error				
Residual	5308.65	90	58.99	
Total	5715.35	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	22.68
Control	41	25.19
Sex		
Male	43	23.10
Female	52	24.30

ANOCOV 16

Analysis of Covariance for the Ninth Grade on Post Test Career Exploration with Pretest Career Exploration as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	4518.84	1	4518.84	1.41
Sex	7080.39	1	7080.39	2.21
Interaction	4106.32	1	4106.32	1.28
Control: Pretest				
Covariate	4425.49	1		
Error				
Residual	288316.13	90	3203.51	
Total	308695.19	94		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	54	169.31
Control	41	155.34
Sex		
Male	43	172.78
Female	52	155.42

APPENDIX F

ANOCOV 17 through 32

ANOCOV 17

Analysis of Covariance for the Tenth Grade
on Post Test Reading Raw Score with
Pretest Reading Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	71.53	1	71.53	2.27
Sex	38.20	1	38.20	1.21
Interaction	10.79	1	10.79	.34
Control: Pretest Covariate	1528.30	1		
Error Residual	1515.71	48	31.58	
Total	3163.88	52		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	28.36
Control	21	30.83
Sex		
Male	26	28.47
Female	27	30.18

ANOCOV 18

Analysis of Covariance for the Tenth Grade on Post Test Reading Percentile with Pretest Reading Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	334.04	1	334.04	.96
Sex	119.31	1	119.31	.34
Interaction	33.18	1	33.18	.10
Control: Pretest Covariate	12384.92	1		
Error Residual	16321.43	47	347.26	
Total	29191.69	51		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	31	44.20
Control	21	49.52
Sex		
Male	25	44.77
Female	27	47.81

160

Analysis of Covariance for the Tenth Grade on Post Test Arithmetic Concepts Raw Score with Pretest Arithmetic Concepts Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	4.91	1	4.91	.37
Sex	11.57	1	11.57	.88
Interaction	49.42	1	49.42	3.77
Control: Pretest				
Covariate	643.47	1		
Error				
Residual	616.03	47	13.11	
Total	1324.51	51		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	20.14
Control	20	20.82
Sex		
Male	26	20.88
Female	26	19.92

ANOCOV 20

Analysis of Covariance for the Tenth Grade on Post Test Arithmetic Concepts Percentile with Pretest Arithmetic Concepts Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	638.48	1	638.48	1.90
Sex	483.53	1	483.53	1.44
Interaction	1025.31	1	1025.31	3.05
Control: Pretest				
Covariate	14400.19	1		
Error				
Residual	15790.38	47	335.97	
Total	32425.83	51		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	52.40
Control	20	43.46
Sex		
Male	26	52.03
Female	26	45.89

ANOCOV 21

Analysis of Covariance for the Tenth Grade on Post Test Arithmetic Applications Raw Score with Pretest Arithmetic Applications Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	1.52	1	1.52	.15
Sex	52.86	1	52.86	5.35*
Interaction	56.97	1	56.97	5.76*
Control: Pretest				
Covariate	404.36	1		
Error				
Residual	445.04	45	9.89	
Total	959.99	49		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	30	12.26
Control	20	12.61
Sex		
Male	26	13.40
Female	24	11.31

*significant at .05 level

ANOCOV 22

Analysis of Covariance for the Tenth Grade on Post Test Arithmetic Application Percentile with Pretest Arithmetic Application Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	329.55	1	329.55	.99
Sex	1633.57	1	1633.57	4.92*
Interaction	2331.18	1	2331.18	7.02*
Control: Pretest				
Covariate	13833.96	1		
Error				
Residual	14934.66	45	331.88	
Total	33198.74	49		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	30	43.11
Control	20	37.68
Sex		
Male	26	46.55
Female	24	34.86

*significant at .05 level

ANOCOV 23

Analysis of Covariance for the Tenth Grade on Post Test Study Skills: References Raw Score with Pretest Study Skills: References Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	31.64	1	31.64	3.14
Sex	.41	1	.41	.04
Interaction	32.03	1	32.03	3.18
Control: Pretest				
Covariate	95.75	1		
Error				
Residual	483.59	48	10.08	
Total	643.88	52		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	11.71
Control	21	13.30
Sex		
Male	27	12.25
Female	26	12.43

ANOCOV 24

Analysis of Covariance for the Tenth Grade on Post Test Study Skills: References Percentile with Pretest Study Skills: References Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	1227.58	1	1227.58	2.52
Sex	51.21	1	51.21	.11
Interaction	2923.26	1	2923.26	5.99*
Control: Pretest Covariate	7985.06	1		
Error Residual	23410.97	48	487.73	
Total	35585.13	52		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	45.45
Control	21	55.59
Sex		
Male	27	50.44
Female	26	48.46

*significant at .05 level

166

ANOCOV 25

Analysis of Covariance for the Tenth Grade on Post Test Study Skills: Graphics Raw Score with Pretest Study Skills: Graphics Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	41.07	1	41.07	2.67
Sex	1.56	1	1.56	.10
Interaction	9.20	1	9.20	.60
Control: Pretest Covariate	766.11	1		
Error Residual	722.84	47	15.38	
Total	1540.07	51		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	18.48
Control	20	20.32
Sex		
Male	27	19.36
Female	25	19.00

ANOCOV 26

Analysis of Covariance for the Tenth Grade on Post Test Study Skills: Graphics Percentile with Pretest Study Skills: Graphics Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	322.25	1	322.25	.76
Sex	14.51	1	14.51	.03
Interaction	273.44	1	273.44	.65
Control: Pretest				
Covariate	21732.06	1		
Error				
Residual	19889.62	47	423.18	
Total	42224.45	51		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	32	49.41
Control	20	54.58
Sex		
Male	27	51.92
Female	25	50.83

ANOCOV 27

Analysis of Covariance for the Tenth Grade on Post Test Career Attitude with Pretest Career Attitude as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	266.10	1	266.10	7.12**
Sex	62.70	1	62.70	1.68
Interaction	8.91	1	8.91	.24
Control: Pretest				
Covariate	2097.01	1		
Error				
Residual	2169.27	58		
Total	4614.57	62		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	39	45.30
Control	24	49.55
Sex		
Male	30	45.86
Female	33	47.88

**significant at .01 level

ANOCOV 28

Analysis of Covariance for the Tenth Grade on Post Test Career Activity with Pretest Career Activity as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	13.91	1	13.91	.21
Sex	16.62	1	16.62	.25
Interaction	23.02	1	23.02	.35
Control: Pretest				
Covariate	2414.55	1		
Error				
Residual	3674.04	56	65.61	
Total	6142.88	60		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	39	60.93
Control	22	59.92
Sex		
Male	30	61.11
Female	31	60.05

ANOCOV 29

Analysis of Covariance for the Tenth Grade on Post Test School with Pretest School as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	74.22	1	74.22	5.55*
Sex	6.87	1	6.87	.51
Interaction	.17	1	.17	.01
Control: Pretest				
Covariate	206.86	1		
Error				
Residual	735.74	55	13.38	
Total	1026.93	59		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	38	15.61
Control	22	17.96
Sex		
Male	29	16.83
Female	31	16.14

*significant at .05 level

ANOCOV 30

Analysis of Covariance for the Tenth Grade on Post Test Self-Awareness with Pretest Self-Awareness as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	4.87	1	4.87	2.05
Sex	2.84	1	2.84	1.19
Interaction	.44	1	.44	.19
Control: Pretest				
Covariate	109.84	1		
Error				
Residual	128.42	54	2.38	
Total	246.71	58		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	37	12.69
Control	22	12.09
Sex		
Male	28	12.24
Female	31	12.68

ANOCOV 31

Analysis of Covariance for the Tenth Grade on Post Test Career Planning Knowledge with Pretest Career Planning Knowledge as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	541.30	1	541.30	20.79***
Sex	.59	1	.59	.02
Interaction	15.72	1	15.72	.60
Control: Pretest				
Covariate	202.51	1		
Error				
Residual	1431.70	55	26.03	
Total	2192.84	59		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	38	21.11
Control	22	27.49
Sex		
Male	30	23.35
Female	30	23.55

***significant at .05 level

ANOCOV 32

Analysis of Covariance for the Tenth Grade on Post Test Career Exploration with Pretest Career Exploration as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	.32	1	.32	.01
Sex	60.19	1	60.19	.14
Interaction	.01	1	.01	.01
Control: Pretest				
Covariate	18649.61	1		
Error				
Residual	23113.77	54	428.03	
Total	41824.03	58		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	37	164.84
Control	22	164.68
Sex		
Male	29	165.81
Female	30	163.78

APPENDIX G

ANOCOV 33 through 48

175

Analysis of Covariance for the Full Group on Post Test Reading Raw Score with Pretest Reading Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	.06	1	.06	.01
Sex	44.02	1	44.02	1.44
Interaction	10.16	1	10.16	.33
Control: Pretest				
Covariate	5164.52	1		
Error				
Residual	4296.63	141	30.47	
Total	9515.34	145		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	85	28.26
Control	61	28.30
Sex		
Male	66	27.67
Female	80	28.78

ANOCOV 34

Analysis of Covariance for the Full Group on Post Test Reading Percentile with Pretest Reading Percentile as Covariate.

SOURCE	SS	df	MS	F
Effects				
Group	21.03	1	21.03	.07
Sex	225.55	1	225.55	.70
Interaction	85.34	1	85.34	.27
Control: Pretest Covariate	47785.25	1		
Error Residual	44974.67	140	321.25	
Total	93095.00	144		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	84	47.60
Control	61	46.81
Sex		
Male	65	45.87
Female	80	48.40

ANOCOV 35

Analysis of Covariance for the Full Group On Post Test Arithmetic Concepts Raw Score with Pretest Arithmetic Concepts Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	20.86	1	20.86	1.21
Sex	1.30	1	1.30	.08
Interaction	87.87	1	87.87	5.11*
Control: Pretest				
Covariate	1534.60	1		
Error				
Residual	2388.12	139	17.18	
Total	4032.31	143		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	87	21.02
Control	57	21.83
Sex		
Male	65	21.45
Female	79	21.25

*significant at .05 level

ANOCOV 36

Analysis of Covariance for the Full Group on Post Test Arithmetic Concepts Percentile with Pretest Arithmetic Concepts Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	326.26	1	326.26	.80
Sex	26.04	1	26.04	.06
Interaction	2257.95	1	2257.95	5.56*
Control: Pretest				
Covariate	40512.72	1		
Error				
Residual	56451.71	139	406.13	
Total	99586.00	143		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	87	60.16
Control	57	56.80
Sex		
Male	65	59.30
Female	79	58.44

*significant at .05 level

ANOCOV 37

Analysis of Covariance for the Full Group on Post Test Arithmetic Applications Raw Score with Pretest Arithmetic Applications Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	37.64	1	37.64	4.04*
Sex	57.74	1	57.74	6.20*
Interaction	80.78	1	80.78	8.67**
Control: Pretest				
Covariate	1257.04	1		
Error				
Residual	1294.86	139	9.32	
Total	2725.81	143		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	85	12.66
Control	59	13.70
Sex		
Male	65	13.80
Female	79	12.51

* significant at .05 level
** significant at .01 level

ANOCOV 38

Analysis of Covariance for the Full Group on Post Test Arithmetic Applications Percentile with Pretest Arithmetic Applications Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	267.28	1	267.28	.73
Sex	2027.74	1	2027.74	5.16*
Interaction	3136.96	1	3136.96	8.53**
Control: Pretest				
Covariate	50305.21	1		
Error				
Residual	51107.75	139	367.68	
Total	106797.56	143		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	85	49.30
Control	59	52.09
Sex		
Male	65	54.62
Female	79	47.00

*significant at .05 level
**significant at .01 level

ANOCOV 39

Analysis of Covariance for the Full Group on Post Test Study Skills: References Raw Score with Pretest Study Skills: References Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	.22	1	.22	< .01
Sex	.07	1	.07	< .01
Interaction	.86	1	.86	.03
Control: Pretest Covariate	125.14	1		
Error				
Residual	4214.71	144	29.27	
Total	4340.59	148		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	86	12.52
Control	63	12.61
Sex		
Male	68	12.58
Female	81	12.56

Analysis of Covariance for the Full Group on Post Test Study Skills: References Percentile with Pretest Study Skills: References Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	150.68	1	150.68	.26
Sex	389.48	1	389.48	.67
Interaction	879.36	1	879.36	1.52
Control: Pretest Covariate	35671.06	1		
Error Residual	83491.50	144	579.80	
Total	120598.06	148		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	86	53.02
Control	63	55.07
Sex		
Male	68	52.11
Female	81	55.39

ANOCOV 41

Analysis of Covariance for the Full Group on Post Test Study Skills: Graphics Raw Score with Pretest Study Skills: Graphics Raw Score as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	83.12	1	83.12	1.26
Sex	40.23	1	40.23	.61
Interaction	27.66	1	27.66	.42
Control: Pretest				
Covariate	1168.71	1		
Error				
Residual	9412.76	143	68.82	
Total	10726.69	147		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	86	18.83
Control	62	20.36
Sex		
Male	68	20.05
Female	80	18.98

ANOCOV 42

Analysis of Covariance for the Full Group on Post Test Study Skills: Graphics Percentile with Pretest Study Skills: Graphics Percentile as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	2282.01	1	2282.01	4.54*
Sex	243.17	1	243.17	.48
Interaction	3843.35	1	3843.35	7.65**
Control: Pretest				
Covariate	50505.68	1		
Error				
Residual	71827.63	143	502.29	
Total	128800.81	147		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	86	51.57
Control	62	59.58
Sex		
Male	68	53.51
Female	80	56.13

* significant at .05 level
** significant at .01 level

ANOCOV 43

Analysis of Covariance for the Full Group on Post Test Career Attitude with Pretest Career Attitude as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	389.46	1	389.46	7.85**
Sex	84.87	1	84.87	1.71
Interaction	4.15	1	4.15	.08
Control: Pretest				
Covariate	7832.98	1		
Error				
Residual	7738.68	156	49.61	
Total	16060.29	160		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	97	43.97
Control	64	47.15
Sex		
Male	73	44.43
Female	88	45.89

**significant at .01 level

ANOCOV 44

Analysis of Covariance for the Full Group on Post Test Career Activity with Pretest Career Activity as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	998.34	1	998.34	13.99***
Sex	.41	1	.41	.01
Interaction	32.65	1	32.65	.46
Control: Pretest Covariate	6027.54	1		
Error Residual	10993.09	154	71.38	
Total	18052.67	158		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	96	60.77
Control	63	55.64
Sex		
Male	73	58.80
Female	86	58.69

***significant at .001 level

ANOCOV 45

Analysis of Covariance for the Full Group on Post Test School with Pretest School as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	39.31	1	39.31	1.37
Sex	101.83	1	101.83	3.55
Interaction	25.08	1	25.08	.88
Control: Pretest				
Covariate	310.66	1		
Error				
Residual	4269.59	149	28.66	
Total	4744.87	153		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	91	16.44
Control	63	15.44
Sex		
Male	70	16.91
Female	84	15.28

ANOCOV 46

Analysis of Covariance for the Full Group on Post Test Self-Awareness with Pretest Self-Awareness as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	9.96	1	9.96	1.13
Sex	4.62	1	4.62	.53
Interaction	1.45	1	1.44	.16
Control: Pretest				
Covariate	187.20	1		
Error				
Residual	1302.97	148	8.80	
Total	1505.99	152		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	90	13.21
Control	63	12.69
Sex		
Male	69	13.19
Female	84	12.84

ANOCOV 47

Analysis of Covariance for the Full Group on Post Test Career Planning Knowledge with Pretest Career Planning Knowledge as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	562.59	1	562.59	12.22***
Sex	17.01	1	17.01	.37
Interaction	.85	1	.85	.02
Control: Pretest				
Covariate	395.57	1		
Error				
Residual	6949.70	151	46.03	
Total	7932.95	155		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	93	22.04
Control	63	25.93
Sex		
Male	73	23.25
Female	83	23.93

***significant at .001 level

ANOCOV 48

Analysis of Covariance for the Full Group on Post Test Career Exploration with Pretest Career Exploration as Covariate

SOURCE	SS	df	MS	F
Effects				
Group	2581.83	1	2581.83	1.20
Sex	5158.09	1	5158.09	2.40
Interaction	1692.75	1	1692.75	.79
Control: Pretest				
Covariate	21521.23	1		
Error				
Residual	322081.94	150	2147.21	
Total	353097.56	154		

MEANS ADJUSTED FOR PRETEST

Effect	N	Adjusted Means
Group		
Experimental	92	167.59
Control	63	159.20
Sex		
Male	72	170.37
Female	83	158.81

APPENDIX H

Student Survey

192

STUDENT SURVEY

General	Mode	%
1. How would you rate the overall quality of the CE+ program? Poor 1 2 3 4 5 Excellent	4.0	41.8
2. If you had it to do over again, do you think you would decide to participate in CE+? Definitely Yes 1 2 Definitely No	1.0	77.2
3. In CE+ have you felt that you could progress at your own rate? Definitely No 1 2 3 4 5 Definitely Yes	5.0	43.0
4. In comparison with regular classes, how much opportunity did CE+ provide you for learning about jobs? Much Less 1 2 About Same 3 4 Much More 5	5.0	62.0
5. In comparison with regular classes, how much opportunity did CE+ provide you for learning general knowledge? Much Less 1 2 About Same 3 4 Much More 5	4.0	34.2
6. In comparison with regular classes, how motivated are you to learn in CE+? Much Less 1 2 About Same 3 4 Much More 5	4.0	38.0
7. In comparison with regular classes, how much opportunity did you have to interact with other students and teachers? Much Less 1 2 About Same 3 4 Much More 5	5.0	39.2

8. Do you feel that you were prevented from exploring any jobs because of your sex? 2.0 91.1

Yes - No
1 2

9. What do you think are the two greatest weaknesses of CE+?
(Check the responses that apply or write your own.)

		%
1.	__Some students can't handle the added freedom.	48.1
2.	__Problems with the organization or staff of CE+?	17.7
3.	__Inadequate supervision of students on job site.	6.3
4.	__Lack of a variety of job sites to meet student interest.	35.4
5.	__Insufficient training in basic skills or survival skills.	5.1
6.	__Three hour block of time.	17.7
7.	__Working with too many different people.	5.1
8.	__Other (write in)______________________________	19.0

10. What do you think are the two greatest strengths of CE+?

1.	__Good alternative to other electives.	16.5
2.	__Quality of the people working on the CE+ staff.	29.1
3.	__Students learn a variety of things.	43.0
4.	__Students learn about real-life situations.	51.9
5.	__Experience in working with adults.	27.8
6.	__Individualized program for each student.	20.3
7.	__Good way to learn.	31.6
8.	__Students learn about a variety of jobs.	36.7
9.	__Other (write in)______________________________	

CURRICULUM REQUIREMENTS

1. In what ways have projects been helpful to you in gaining new knowledge or in exploring new ways to learn.

2. In what ways, if any, would you recommend changing the projects?

3. In what ways were explorations meaningful to you?

4. In what ways should explorations (or exploration guides) be changed?

5. In what way was your learning level most meaningful? (Omit if you did not go on a learning level.)

6. How would you recommend changing learning levels?

7. In what ways were your individualized basic skills meetings helpful to you?

8. In what ways would you change the basic skills requirements in CE+?

9. In what ways has dividing the semester into zones been helpful to your planning of CE+ requirements?

10. How would you change the structure of zones?

11. In what ways has it been meaningful to you to keep a journal? (Omit if you did not keep a journal.)

12. What changes regarding journals would you propose?

13. In what ways were the competencies helpful to you?

14. What changes in the competencies would you recommend for next year?

15. In what ways have the resources (pamphlets, filmstrips, films, magazines) in the learning center been helpful to you?

16. What changes would you recommend in CE+ resources?

17. In what ways has your Learning Manager been helpful to you?

18. What changes would you recommend in the interactions between students and Learning Managers?

19. Do you feel the jobs you explored could be done by either a male or a female worker? Explain.

APPENDIX I

Employer Opinion Survey

CE+ EMPLOYER OPINION SURVEY
1978 - 79

Your Name____

Name of company/organization______________________________

Approximate number of employees at your site_______________

Approximate number of students that have visited your site this year_______________

Length of time you have been participating with the program__________

% Yes

1. Did the program staff provide you with enough information to help you direct student activities at your site? 93

   Yes____ No____ Comment______________________________

2. Do you feel students are able to learn things at job sites that they could not learn as well in a regular school classroom. 98

   Yes____ No____ Comment______________________________

3. Do you think the students you have worked with are really interested in learning new things? 73

   No_____ Yes_____

4. Would you recommend to a potential employer or resource person that he/she also become involved with the program? 95

   Yes____ No____ Comment______________________________

5. How have employees at your site reacted to your businesses participation in CE+ (check one). 91

   Positive reaction_____ Negative reaction_____

   Comment____

6. Did you receive adequate communications from the CE+ program. 93

7. What other comments or recommendations about the program would you like to make?

APPENDIX J

Parent Opinion Survey

CE+ PROGRAM PARENT OPINION SURVEY

Mode %

1. How well do you feel the CE+ Program compares with the past school experiences of your daughter or son? 5.0 58.3

Much Worse				Much Better
1	2	3	4	5

2. If you had it do do over again, would you want your son or daughter to participate in the CE+ Program? 5.0 83.3

Definitely No				Definitely Yes
1	2	3	4	5

3. How well do you think your son or daughter likes the CE+ Program compared with past school experiences? 5.0 69.4

Much Worse				Much Better
1	2	3	4	5

4. Have you received enough information about your son or daughter's progress in the CE+ Program? 5.0 77.8

Definitely No				Definitely Yes
1	2	3	4	5

5. About how often have you had any contact with any CE+ Program staff members? 1.0 36.1

Almost Never				Very Frequently
1	2	3	4	5

6. In comparison with regular classes how much opportunity did the CE+ Program provide your daughter or son for learning about occupations? 5.0 83.3

Much Less	About the Same			Much More
1	2	3	4	5

7. What effect, if any, has the CE+ Program had on helping your son or daughter form career plans? 5.0 47.2

Definitely Bad		No Effect		Definitely Good
1	2	3	4	5

8. In comparison with regular classes how much opportunity did the CE+ Program provide your daughter or son for general learning (i.e., Basic Skills and Life Skills)? 4.0 41.7

Much Less — About the Same — Much More
1 2 3 4 5

9. In comparison with past experiences in regular classes how motivated is your daughter or son to learn in the CE+ Program? 5.0 50.0

Much Less — About the Same — Much More
1 2 3 4 5

10. Before entering the CE+ Program, how often did your son or daughter talk to you about what was going on in regular classes? 3.0 38.9

Almost Never — Almost Daily
1 2 3 4 5

11. How often does your son or daughter talk to you about what's going on in the CE+ Program? 5.0 75.0

Almost Never — Almost Daily
1 2 3 4 5

12. How many meetings have you attended during this school year where other parents of CE+ students were present? 1.0 58.3

None 1 2 3 4 or more

13. Do you feel your son or daughter was prevented from exploring job sites because of his/her sex? 2.0 100

Yes 1 No 2

14. What do you think are the greatest weaknesses of the CE+ Program? (Check any of the following which are applicable.)

1. Some students can't handle the freedom 44.4%
2. Problems in the organization/staffing of the program 2.8%
3. Students not receiving sufficient training in basic skills or survival skills 5.6%

APPENDIX K

Follow-up Questionnaire

CAREER EDUCATION PLUS
Follow-up Questionnaire

1. Has the fact that you participated in CE+ had any effect on the high school courses you selected for next year? Circle one.

   Definitely   Somewhat   Not at all

2. Has your participation in CE+ helped to firm up any of your career choices or career goals following your education?

   Definitely   Somewhat   Not at all

3. Looking back on your experiences in CE+, were they helpful in any of the following areas: (Circle any that apply.)

   1. Organizing time, efforts, etc.
   2. Abilities in the basic skills of reading, writing, speaking and mathematics.
   3. Maturity and self-direction.
   4. Relating better to other people.
   5. Locating resources for information.
   6. Self-Confidence.
   7. Experience in working with adults.
   8. Understanding jobs and job attitudes.
   9. Realistic attitudes toward work, life, values.
   10. Decision making skills.
   11. Taking responsibility for own actions.
   12. Preparations to accept adult responsibilities and privileges.
   13. Making application for employment.
   14. Obtaining full or part time employment.

4. In your estimation at this time how would you rate the overall quality of CE+.

   Poor   Excellent
   1   2   3   4   5

5. If you had to do it over again, do you think you would decide to be in CE+.

   No   Yes

6. In comparison with regular traditional classes, how much opportunity did CE+ provide you for learning about jobs?

   Much Less   About Same   Much More
   1   2   3   4   5

7. In comparison with regular traditional classes, how much opportunity did CE+ provide you for learning general knowledge?

Much Less		About Same		Much More
1	2	3	4	5

8. In comparison with regular traditional classes, how much opportunity did you have to interact with other students and teachers?

Much Less		Much the Same		Much More
1	2	3	4	5

9. At what level do you see CE+ best serving a need and purpose:

Junior High Grades 9 & 10 Grades 11 & 12 Grades 9-12

10. Do you feel that CE+ has provided you with some positive and beneficial experiences that have given you advantages over your peers?

No Yes

11. In your own words, would you take a few minutes to sum up some of your thoughts, feelings, and opinions on your experiences in CE+ and on the program in general.

Signature of Student

Address

Date

APPENDIX L

Advisory Board Members

CE+ ADVISORY BOARD MEMBERS

BUSINESS & OFFICE CLUSTER:

Wayne Brostrom
First National Bank
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Vocational Education
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Mavis Williamson, Business
Education Instructor
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Ethel Crisera, Chairwoman
CE+ Advisory Board
1127 Valley View Drive
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MAGIC CITY CAMPUS STUDENT:

Nancy Broyles, Secretary
CE+ Advisory Board
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Lorna Van de Streek
Y M C A
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CONTINUED

CONSTRUCTION CLUSTER:

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Mackley Construction Company
Vice Chairman, CE+ Advisory Board
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MARKETING & DISTRIBUTION CLUSTER:

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HEALTH CLUSTER:

Penny Hamilton, Nursing Supervisor
First District Health Unit
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Dr. Jerry Tuchscherer
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207